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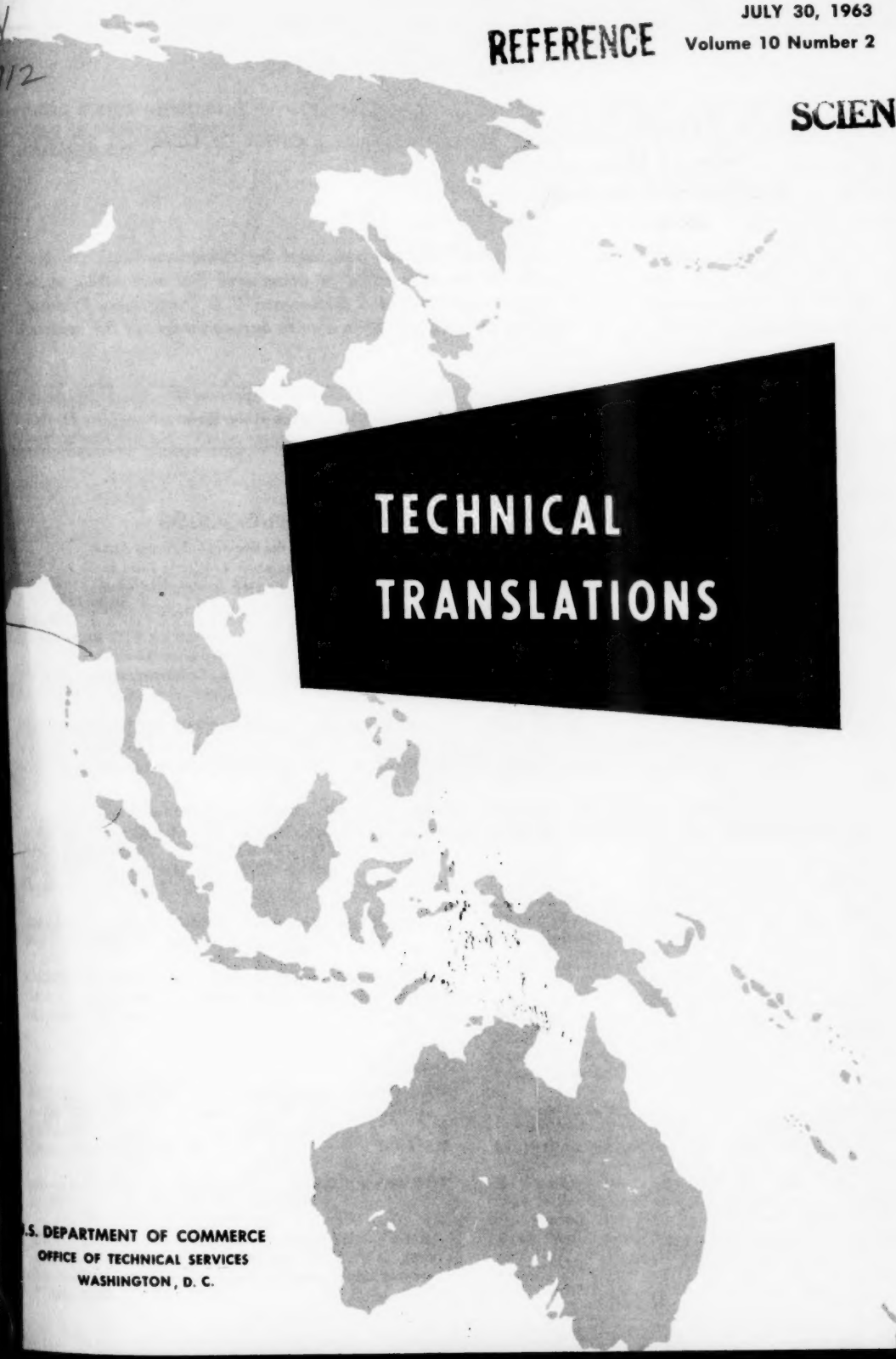

TECHNICAL TRANSLATIONS

U.S. DEPARTMENT OF COMMERCE
OFFICE OF TECHNICAL SERVICES
WASHINGTON, D. C.

TECHNICAL TRANSLATIONS

U.S. DEPARTMENT OF COMMERCE
Luther H. Hodges, *Secretary*

OFFICE OF TECHNICAL SERVICES

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*Descriptors marked with an asterik are listed in the subject index.

BIBLIOGRAPHY

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 169 (GENERAL SERIES). 13 May 63, 5p. JPRS: 19166.
Order from OTS $0.50 63-21812

Abstract trans. of Stiinta si Tehnica (Rumania) 1963, v. 15, no. 2, p. 2-8, 14-21, 24-28, 32-37, 45.

DESCRIPTORS: *Abstracts, Bibliographies, *Railroads, *Agriculture, Roofs, Pneumatic systems, Motion picture screens, *Biology, Medicine, Geology.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 174 (GENERAL SERIES). 16 May 63, 30p. JPRS: 19212.
Order from OTS $1.00 63-21823

Abstract trans. of Ceskoslovenska Akademie Ved. Vestnik, 1963, v. 72, no. 1, p. 1-43, 51-181.

DESCRIPTORS: *Abstracts, Bibliographies, *Scientific organizations, *Conferences, Scientific research, Scientific personnel.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 176 (GENERAL SERIES). 16 May 63, 9p. JPRS: 19214.
Order from OTS $0.50 63-21825

Abstract trans. of Magyar Tudomany (Hungary) 1963, v. 8[70] no. 3, p. 153-219, 222-231.

DESCRIPTORS: *Abstracts, Bibliographies, *Social sciences, *Medicine, Psychology, Relativity, Theory, Agriculture, Scientific organizations, Conferences, *Literature.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 182 (GENERAL SERIES). 23 May 63, 10p. JPRS: 19358.
Order from OTS $0.50 63-21898

Abstract trans. of Bulgarska Akademiya na Naukite. Spisanie, 1962, v. 7, no. 4, p. 3-139.

DESCRIPTORS: *Abstracts, Bibliographies, *Political science, *Social sciences, Geodesics, Scientific personnel, Conferences, Psychology, Literature, Scientific organizations.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 183 (GENERAL SERIES). 28 May 63, 36p. JPRS: 19435.
Order from OTS $1.00 63-21931

Consist of abstracts of articles from selected scientific and technical journals of Bulgaria and Rumania.

DESCRIPTORS: *Abstracts, Bibliographies, Nuclear physics, Physics, Electricity, Magnetism, Chemistry, Chemical reactions, Biochemistry, Photoelectric effect, Biology, Radiobiology.

Library of Congress, Washington, D. C.
MONTHLY INDEX OF RUSSIAN ACCESSIONS.
June 63, 325p.
Order from GPO $12.00/year

This index is a record of the publications in languages spoken in the Soviet Union currently received by the Library of Congress and a group of cooperating libraries. It consists of three parts: Part A lists monographic literature published after 1944, with the title in the original language preceded by its English translation; Part B lists periodicals published after 1946; Part C constitutes a subject guide to both the monographs and periodical articles listed in Parts A and B.

AGRICULTURE

POLISH AGRICULTURAL ANNUAL AND THE "ADVANCES IN AGRICULTURAL SCIENCES" JOURNALS OF THE SECTION OF AGRICULTURAL AND FORESTRY SCIENCES OF THE POLISH ACADEMY OF SCIENCES: SELECTED ARTICLES. 1963, 93p.
114 refs. PL-480 Agr.
Order from OTS $0.50 60-21568

Trans. of Roczniki Nauk Rolniczych. Seria B: [Zootechniczna] (Poland) 1955, v. 69, no. 3, p. 399-439; 1957, v. 71, no. 2, p. 223-249; no. 3, p. [399]-420; 1958, v. 72, no. 4, p. 545-563; Postepy Nauk Rolniczych (Poland) 1959, v. 6, no. 2, p. 61-73.

DESCRIPTORS: *Agriculture, *Forestry, *Cystine, *Fibers (Natural), *Sheep, Mechanical properties, *Transplantation, *Eggs, Cells (Biology), Density, *Fur, Animals, *Reproductive system, Rhythm (Biology), Spark shadowgraph photography

Contents:
Determining correlation between cystine content and strength, diameter, and length of wool, by W. Nawara and M. Osikowski
Transplantation of ova in sheep, by M. Kardyjowicz and J. Stepinski
Studies on determining an objective method for estimating the coat density of sheep and fur-bearing animals, by W. Nawara and S. Kaszowski
The seasonal and cyclic character of reproductive processes in sheep and the possibilities of extending their breeding season, by M. Kardymowicz
Suitability of shadowgrams for characterizing white mixed wools, by M. Osikowski

USSR INDUSTRIAL DEVELOPMENT: SOVIET TRACTORS AND AGRICULTURAL MACHINERY NO. 67. 17 May 63, 19p. JPRS: 19235.
Order from OTS $0.75 63-21836

Trans. from Sel'skaya Zhizn' (USSR) 1963, 31 Mar, p. 2; 2 Apr, p. 1; 5 Apr, p. 1-12; 6 Apr, p. 1; 11 Apr, p. 1; 13 Apr, p. 2; 14 Apr, p. 1-2; 16 Apr, p. 1.

DESCRIPTORS: *Industrial production, *Tractors, *Agricultural machinery, Machines, Women, *Railroad cars, Transportation, Storage, *Maintenance, Cutting tools, *Machine tools, Industrial equipment, *Vegetables, Corn, Agriculture.

Contents:
Production at the Dal'sel'khozmash plant
Tula wide-swath windrowers
Production at the Sibsel'mash plant
Organization of girls' tractor brigade
Rail transport and parking difficulties at the Rostel' mash plant, by I. Kostenko
Difficulties in agricultural machine repair (excerpt)
Self-sharpening ploughshare
Special aid to agriculture by Krasnoyarsk combine plant, by B. Korablev
Transfer of surplus plant machine tools to rural work shops, by A. Gorchakov
Introduction of new sugar beet and corn cultivation methods, by V. Pervitskii and V. Svetlichnyi
Delays in the production of SSh-75 self-propelled chassis and SNU-0.5 hay stacker, by Yu. Shcheglov and V. Yambaev.

Abe, Isao; Masuo, Yutaka, and Tsuzuki, Keiko.
STUDIES ON PHYSICAL PROPERTIES OF LEAF TOBACCOS. II. ON THE SOFTNESS OF TOBACCO LEAVES. [1963] 17p.
Order from K-H $17.00 K-H-12649

Trans. of [Nihon Senbai Kosha Chuo Kenkyusho Kenkyu Hokoku] (Japan) 1962, no. 104, p. 37-41.

DESCRIPTORS: *Tobacco, Physical properties.

Andrés, L.-E.
RECENT PROGRESS IN THE MANUFACTURE OF PHOSPHATE FERTILIZERS [Progrés dans la Fabrication des Engrais Phosphatés]. [1963] [14]p.
Order from ATS $14.25 ATS-33Q69F

Trans. of Chim[ie et] Ind[ustrie] (France) 1955, v. 73, no. 3, p. 531-540.
Another trans. is available from OTS or SLA $1.60 as 60-23449, TVA-3481, 26 Aug 55 [14]p.

DESCRIPTORS: *Fertilizers, Manufacturing methods, *Phosphates, *Metallic compounds, Additives, Stabilization.

Filippov, A., Bolinskii, V., and Polyak, A.
SPEED: AN IMPORTANT PROBLEM IN MECHANIZATION. USSR Industrial Development Soviet Tractors and Agricultural Machinery no. 60. 9 Apr 63 [11]p. JPRS: 18626.
Order from OTS $0.50 63-21546

Trans. from Sel'skaya Zhizn' (USSR) 1963, no. 46, 23 Feb, p. 4.

DESCRIPTORS: *Industrial production, *Tractors, *Agriculture machinery.

Kurnikov, I. I. and Karpelevich, V. M.
DISPOSITIVO PARA MANDO HIDRAULICO DE APEROS REMOLCADOS (Prisposobleniya dlya Gidravlicheskogo Upravleniya Pritsepnymi s. -kh. Mashinami) (Hydraulic Actuator Device for Trailing Hauled Farm Implements) 13p. CID: 62 163
Order from OTS, ETC or CID $1.10 52-26812

Trans. in Spanish of Traktory i Sel'khozmashiny (USSR) 1959, no. 9, p. 23-25.

DESCRIPTORS: *Hydraulic actuators, *Trailers, Agriculture, *Agricultural machinery.

Lesnov, P. A.
GROWING OF TREES AND BUSHES ON EXPLOITED PEAT FIELDS (Vyrashchivanie Drevesno-Kustarnikovoi Rastitel'nosti na Vyrabotannykh Torfyannykh Ploshchadyakh). Apr 63 [4]p. RTS-2224.
Order from OTS or SLA $1.10 63-15956

Trans. of Torfyanaya Promyshlennost' (USSR) 1962 [v. 39] no. 5, p. 28-29.

DESCRIPTORS: *Trees, *Plants (Botany), Growth, *Peat, Terrain, Drainage.

The article describes the experience of the Balakhnin forestry enterprise of the Gorki region in growing trees and bushes on exploited peat land. (Author)

Mandel'baum, A. I.
TRABAJOS DEL VNIITP (INSTITUTO DE INVESTIGACIONES CIENTIFICAS DE LA INDUSTRIA TURBERA) REALIZADOS EN 1959 ACERCA DE LA PREPARACION INDUSTRIAL DE FERTILIZANTES A BASE DE MINERAL DE TURBA (Raboty VNIITP v 1959 g. po Promyshlennoi Zagotovke Torfomineral'nykh Udobrenii) (Work Carried Out in 1959 by the VNIITP -Peat Industry Scientific Research Institute- on the Industrial Preparation of Peat Based Fertilizers). 15p. CID: 62-116.
Order from OTS, ETC or CID $1.20 62-26765

Trans. in Spanish of Torfyanaya Promyshlennost' (USSR) 1960 [v. 37] no. 4, p. 15-18.

DESCRIPTORS: *Fertilizers, Industrial production, *Peat.

Matyukhov, G. F.
ACERCA DE LA ESTABILIDAD TRANSVERSAL DEL TRACTOR (K Voprosy o Poperechnoi Ustoichivosti Traktora) (Study of Traverse Stability in the Tractor) 11p. CID: 62-186.
Order from OTS, ETC or CID $1.05 62-26835

Trans. in Spanish of Traktory i Sel'khozmashiny (USSR) 1959, no. 9, p. 9-12.

DESCRIPTORS: *Tractors, Stability.

Ol'shanskii, M.
BIOLOGICAL SCIENCE AND AGRICULTURAL PRODUCTION. 7 May 63, 17p. JPRS: 19079.
Order from OTS $0.50 63-21767

Trans. of Kommunist, Moscow (USSR) 1963, v. 39, no. 4, p. 14-26.

DESCRIPTORS: Biology, *Agriculture, Production, Plants (Biology), *Genetics, Animals,

Panov, I. M.
TRACTOR DE RUEDAS PARA TERRENOS EN CUESTA (Kolesnyi Traktor dlya Raboty na Sklonakh) (Wheel Tractor for Sloping Terrain). 3p. 2 refs. CID:62-161.
Order from OTS, ETC or CID $0.70 62-26810

Trans. in Spanish of Traktory i Sel'khozmashiny (USSR) 1960 [v. 30] no. 9, p. 46.

DESCRIPTORS: *Tractors, Wheels, *Terrain.

Rabinovich, I. P.
EMPLEO DE NUEVOS MATERIALES EN LA FABRICACION DE MAQUINARIA AGRICOLA (Primenenie Novykh Materialov v Proizvodstve s. -kh. Mashin) (Use of New Materials in Farm Machinery Production) 18p. 2 refs. CID: 62-162.
Order from OTS, ETC or CID $1.30 62-26811

Trans. in Spanish of Traktory i Sel'khozmashiny (USSR) 1960 [v. 30] no. 10, p. 25-27.

DESCRIPTORS: *Materials, Industrial production, *Machinery, Agriculture, *Agricultural machinery.

Rashevskii, A. N. and Peisakhzon, N. Ya.
CARGADOR UNIVERSAL ARTICULADO AL TRACTOR DT-20. (Universal'nye Navesnye Pogruzchiki na Traktor DT-20) (Universal Loader Mounted on the DT-20 Tractor). 8p. CID: 62-159.
Order from OTS, ETC or CID $0.90 62-26808

Trans. in Spanish of Traktory i Sel'khozmashiny (USSR) 1960 [v. 30] no. 8, p. 32-33.

DESCRIPTORS: *Tractors, *Agricultural machinery.

Sivak, B. G.
SOBRE PERFECCIONAMIENTOS EN LA CONSTRUCCION DE TRACTORES (Ob Usovershenstvovanii Konstruktsii Traktorov) (Improvements in Tractor Construction). 13p. CID: 62-164.
Order from OTS, ETC or CID $1.10 62-26813

Trans. in Spanish of Traktory i Sel'khozmashiny (USSR) 1960 [v. 30] no. 10, p. 1-4.
Another trans. is available in English from OTS $0.50 in 61-11736, JPRS-6398, 11 Dec 60, 16p.

DESCRIPTORS: *Tractors, Industrial production, Construction.

Animal Husbandry

NEW BOOKS ON VETERINARY MEDICINE. 20 June 62, 2p. 11 refs. Trans. V-155 [pt. 1].
Order from OTS or SLA $1.10 62-32130

Trans. of Veterinariya (USSR) 1962, v. 39, no. 3, p. 96.

DESCRIPTORS: *Veterinary medicine, *Bibliographies, Diseases.

NEW BOOKS ON VETERINARY MEDICINE.
20 June 62, 2p. 7 refs. Trans. V-155 [pt. 2].
Order from OTS or SLA $1.10 62-32131

Trans. of Veterinariya (USSR) 1962, v. 39, no. 5, p. 88.

DESCRIPTORS: *Veterinary medicine, *Bibliographies, Diseases.

RULES CONCERNING MEASURES AND PROCEDURES DESIGNED TO PREVENT, COMBAT, AND EXTERMINATE HOG AND CHICKEN PLAGUE, NO. 06-389/1, ITEM 137, 13 Mar 63. 30 Apr 63, 4p. JPRS: 18984.
Order from OTS $0.50 63-21722

Trans. of Sluzbeni List [Belgrade] (Yugoslavia) 1963 [v. 19] no. 11, p. 154-155.

DESCRIPTORS: Diseases, *Swine, *Chickens, Inhibition, *Pasteurella, Veterinary medicine, Vaccines.

Nishimura, Yutaka, Seto, Kenji and others.
RESEARCH ON SWINE ERYSIPELAS. IV. COMPARISON OF IMMUNITY TESTS OF AVIRULENT ERYSIPELAS VACCINES ON MICE AND ON SWINE (Die Forschung über den Schweinerotlauf. IV.). [1962] [13]p. (refs. omitted).
Order from SLA $1.60 63-10314

Trans. of [Nihon Juigaku Zasshi] (Japan) 1962, v. 24, no. 3, p. 157-163.

DESCRIPTORS: *Swine erysipelas, *Immunity, Tests, *Vaccines, Diseases, Swine, Mice, Antigen-antibody reactions.

Sergeev, V. A., and Fedorova, T. L.
COMPARATIVE EVALUATION OF THE TITRATION METHODS USED FOR THE FOOT-AND-MOUTH VIRUS (Sravnitel'naya Otsenka Metodov Titrovaniya Virusa Yashchura). 11 Jan 63, 7p. 16 refs. Trans. V-1815.
Order from OTS or SLA $1.10 63-15466

Trans. of Veterinariya (USSR) 1962, v. 39, no. 8, p. 67-69.

DESCRIPTORS: *Titration, Test methods, Culture media, Kidneys, *Foot-and-mouth disease, *Viruses, Sensitivity, Veterinary medicine.

Comparative study of various methods of titration of the foot-and-mouth disease, (FMD) virus of types A and O, adapted to the monolayer culture of the calves kidney tissue, was conducted by method of plaques, according to the cytopathic effect, chromatic test, and one week old white mice. In all the culture systems the primary monolayer tissue culture of calves kidneys or cells of this culture were used. The method of plaques and titrating according to the cytopathic effect proved to be the most sensitive. The white mice and the chromatic test proved to be somewhat less sensitive. (Author)

Stakan, G. A. and Soskin, A. A.
EFFECT OF ENVIRONMENTAL CONDITIONS ON THE HERITABILITY OF CHARACTERISTICS. 17 May 63, 7p. 20 refs. JPRS: 19241.
Order from OTS $0.50 63-21838

Trans. of Akademiya Nauk SSSR. Sibirskoe Otdelenie. Izvestiya, 1962, no. 12, p. 145-148.

DESCRIPTORS: Ecology, *Genetics, Animals, *Sheep, Agriculture, Food, *Diet, *Body weight, Fibers, Growth.

Varnagy, Laszlo.
A NEW STAGE IN THE DEVELOPMENT OF THE HUNGARIAN ANIMAL HEALTH ADMINISTRATION. 29 Mar 63 [7]p. JPRS: 18440.
Order from OTS $0.50 63-21456

Trans. of Magyar Allatorvosok Lapja (Hungary) 1963, v. 17, no. 3, p. 81-83.

DESCRIPTORS: *Animals, Medicine, *Scientific organizations, Agriculture, *Public health, *Diseases, Commerce

Vol'fkovich, S. I., Ionass, A. A., and Remen, R. E.
PRODUCTION OF FODDER PHOSPHATES (Proizvodstvo Kormovykh Fosfatov). Apr 63 [17]p. 22 refs. RTS-2238.
Order from OTS or SLA $1.60 63-19137

Trans. of Vsesoyuznoe Khimicheskoe Obshchestvo. Zhurnal (USSR) 1962, v. 7, no. 5, p. 524-529.

DESCRIPTORS: Synthesis, *Phosphates, Food, Animals, *Nutrition, Chemical analysis, Chemical reactions, Fluorine, Dioxides, Silicon compounds, Industrial production.

Plant Cultivation

Jung, J.
ACTION OF CROTONYLIDENE-DIUREA (CD-UREA) AS NITROGEN FERTILIZER. [1962] [5]p.
Order from SLA $1.10 63-10488

Trans. of Plant and Soil (Netherlands) 1961, v. 15, no. 4, p. 284-290.

DESCRIPTORS: *Nitrogen compounds, *Fertilizers, Nitrogen, Aldehydes, Chemical bonds, Soils, Ammonium compounds, Nitrates, Solubility, Urea.

This paper discusses the properties of CD urea as a slow acting N-fertilizer. This compound differs chemically from the condensation products of urea and formaldehyde which are most frequently examined in this connection, especially by its ring structure. Special advantages result from this also as far as the plant-physiological effect is concerned. CD urea shows by the relatively high utilization of its N-component by the plants, a decidedly slow conversion and is washed out of the soil only with great difficulty. (Author)

Jung, J.
NUTRIENT SUPPLY FROM PLASTIC-COATED FERTILIZER GRANULES. [1962] [6]p.
Order from SLA $1.10 63-10295

Trans. of Zeit[schrift] f[ür] Pflanzenernährung, Düngung, Bodenkunde (West Germany) 1960, v. 91, no. 2, p. 122-130.

DESCRIPTORS: *Fertilizers, Nutrition, Particles, *Plastic coatings, *Nitrogen, Potassium, Polymers, Vinyl radicals, Chlorides, Absorption, Esters, Urea formaldehyde resins, Calcium compounds, Ammonium radicals, Nitrates.

The nutrient supply of fertilizer granules, coated with plastic, was tested in a pot experiment. With large nitrophoska granules (10 to 15 mm), the multiple treatment with a diofan solution (mixed polymer of vinylidene chloride) led to a strong influence on the N- and K-absorption in the sense of a slowed-down supply. Less effective was the coating of the fertilizer granules with plastopal (urea-formaldehyde resin). Coating with a mixture of acronal (polyacryl ester) and lutofan (mixed polymer based on vinyl chloride) had no influence on the temporal course of the nutrient supply. With small calcium ammonium nitrate grains (4-5 mm), none of the plastics mentioned gave an effective coating for a longer period. In the case of large granules of the same fertilizer however, multiple treatment with the diofan solution led to a slowed-down nitrogen supply. Large nitrophoska- and calcium ammonium nitrate granules that were treated according to the powdering method with diofan showed in part a very slow nutrient supply. (Author)

Lewicki, S., Ruszkowski, M[arek] and Ruszkowska, B.
CAUSES OF POOR FRUCTIFICATION OF BUCKWHEAT. PT. III. INFLUENCE OF VARIOUS CULTIVATION OPERATIONS ON THE FRUCTIFICATION OF BUCKWHEAT (Przyczyny Zlego Owocowania Gryki. Cz. III. Wplyw Roznych Zabiegow Uprawowych na Owocowanie Gryki) tr. by Maria Radziwill. 1963 [18]p. PL-480.
Order from OTS $0.50 61-11396

Trans. of Hodowla Roslin, Aklimatyzacja i Nasiennictwo (Poland) 1958, v. 2, no. 5, p. 587-601.

DESCRIPTORS: Cereals, *Buckwheat, *Seeds, Growth, Plants (Botany), Growth substances, *Fertility, Azotobacteraceae, Agriculture.

Investigations of the influence of cultivation and fertilization operations on the fructification of buckwheat plants showed that when well developed seeds are sown, the single plants form a higher percentage of seeds. Buckwheat sown earlier (1st and 2nd ten days of May) forms more ramifications and inflorescences and, consequently, more seeds than when sown later (3rd ten days of May and 1st ten days of June). Buckwheat sown in rows spaced at 25 and 40 cm forms more ramifications, inflorescences and seeds than in rows spaced at 12 cm; the percentage of undeveloped seeds is almost equal at all spacings. Increasing seeding densities from 25 to 100 kg/ha reduces the number of ramifications, inflorescences and seeds formed. Spraying the buckwheat in full bloom with phosphorus and potassium, inoculation with azotobacter, or planting protective belts against winds did not improve seed formation. Spraying or dusting with boron during full bloom favors seed formation. (Author) (See also 61-11399)

Lewicki, Stefan and Ruszkowski, Marek.
STUDIES ON BUCKWHEAT. PT. I. GERMINATION BIOLOGY OF BUCKWHEAT (FAGOPYRUM ESCULENTUM) (Studia nad Gryka. Cz. I. Biologia Kielkowania Gryki (Fagopyrum Esculentum)) tr. by Maria Radziwill. 1963 [24]p. 14 refs. PL-480 Agr.
Order from OTS $0.50 61-11399

Trans. of Hodowla Roslin, Aklimatyzacja i Nasiennictwo (Poland) 1958, v. 2, no. 1, p. 67-87.

DESCRIPTORS: Cereals, *Buckwheat, *Seeds, Growth, Biology, Temperature, Plants (Botany), Agriculture, *Fertility.

Experiments on the conditions of buckwheat germination, together with observations of sprouting under field conditions (1949-1956) indicate that: (1) The optimum temperature for germination is 25-26°C; any rise or fall in temperature, be it by only a single degree, has an unfavorable influence on germination. (2) Maximum germination temperature is 31°C. A rise by a single degree causes disturbances manifested by perishing of the plumules, diminution in the number of germinated seeds, and inhibition of water intake by the germinating seeds. (3) Buckwheat does not sprout at 0-4°C. Between 4 and 10°, sprouting lasts about 60 days. At 10-24°C sprouting does not last longer than 17 days, between 16 and 24°C, the majority of seeds produce sprouts more rapidly (after 10 days). (4) Seeding at a depth exceeding 6 cm notably delays sprouting (by 3-13 days) as compared with seeds sown 1-5 cm deep. This delay is smaller at higher temperatures (22-24°). (5) Under field conditions, the course of sprouting is dependent on soil temperature and moisture - consequently on rainfall. (Author)

Rotini, Orfeo Turno, Guerrucci, Nedo, and Maffei, Luigi.
THE ANTIMIOTIC EFFECT OF SYNTHETIC DETERGENTS ON PLANTS, [1962] 12p. 4 refs.
Order from SLA $1.60 62-20242

Trans. of Ricerca Sci[entifica. Parte II:] Rend[iconti. Sezione B: Biologica] (Italy) 1961, v. 1 [no. 1] p. 30-36.

DESCRIPTORS: Inhibition, *Mitosis, *Plants (Botany), Detergents, Sulfonates, Sodium compounds, Fatty acid esters, Toxicity, Hydrogen ion concentration, Vegetables, Cereals, Onions.

The mitosis-inhibitory action of sodium alkylarysulfonate. Sodium laurylsulfonate and of sodium oleate on the bulbs of Allium cepa L was studied. The influence of sodium dioctylsulfosuccinate on some cultivated plants was investigated. The antimitotic threshold of sodium alkylarylsulfonate is found in 0.025% concentration, while for laurylsulfonate and sodium oleate it is 0.1%, or a concentration four times greater; such a threshold is influenced by the hydrogen ion concentration of the medium. The higher the concentration of detergent used, the greater the clear-cut influence which synthetic detergents have on germination of the seeds. The various species investigated show a different sensitivity to sodium dioctylsulfosuccinate, and also the antimitotic threshold measured in various seedlings differs from species to species. (Author)

Vernadskii, V. I.
THE EARTH'S ALUMOPHOSPHATES AND ALUMOSULPHURIC ANALOGS OF KAOLIN ALUMOSILICATES: ABSTRACT. [1962] [3]p. 1 ref.
Order from OTS or SLA $1.10 63-10139

Trans. of Pochvovedenie (USSR) 1939, no. 2, p. 91, biblio. entry no. 152 (orig. pub. in A[kademiya] N[auk] SSSR. Doklady, 1938, v. 18, no. 4/5 [p. 287-294]).

DESCRIPTORS: Abstracts, *Soils, *Aluminum compounds, *Phosphates, *Silicates, *Clays, *Sulfur compounds, Minerals.

Vinogradov, A. P.
BIOCHEMICAL PROVINCES AND ENDEMICS: ABSTRACT. [1962] 2p.
Order from OTS or SLA $1.10 63-10141

Trans. of Pochvovedenie (USSR) 1939, no. 2, p. 95, biblio. entry no. 157 (orig. pub. in A[kademiya] N[auk] SSSR. Doklady, 1938, v. 18, no. 4/5, p. 283-286).

DESCRIPTORS: Abstract, *Ecology, *Biochemistry, *Soils, Chemical elements.

ASTRONOMY

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 57 (ASTRONOMY SERIES). 6 May 63, 4p. JPRS: 19064.
Order from OTS $0.50 63-21752

Trans. of selected abstracts from Referativnyi Zhurnal. Astronomiya [i Geodeziya] (USSR) 1962, nos. 2, 6.

DESCRIPTORS: *Abstracts, *China, *Astronomy, *Radio astronomy, *Solar systems, Catalogs, *Stars.

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 60 (ASTRONOMY SERIES). 20 May 63, 2p. JPRS: 19271.
Order from OTS $0.50 63-21854

Trans. of selected abstracts from Referativnyi Zhurnal. Astronomiya [i Geodeziya] (USSR) 1962, no. 11.

DESCRIPTORS: *Abstracts, *China, *Astronomy, *Radio astronomy, *Sun, Solar atmosphere.

Astrophysics

SOVIET-BLOC RESEARCH IN GEOPHYSICS, ASTRONOMY, AND SPACE, NO. 58. 1 May 63, 2/p. JPRS: 19023.
Order from OTS $16.00/year 61-11147-58
foreign $20.00/year

DESCRIPTORS: *Geophysics, *Astronomy, *Astronautics, *Upper atmosphere, *Space probes, *Astrophysics, Oceanography, Meteorology.

Consists of news items and abstracts of scientific articles on astronomy, meteorology, oceanography, terrestrial geophysics, upper atmosphere and space research, and other miscellaneous subjects.

Astapovich, I. S.
NEW MATERIAL ON THE FALL OF THE LARGE METEORITE OF 30 JUNE 1908 IN CENTRAL SIBERIA. [1963] [49]p. 66 refs.
Order from OTS or SLA $4.60 63-14485

Trans. of Astronomicheskii Zhurnal (USSR) 1933, v. 10, no. 4, p. 465-486.

DESCRIPTORS: *Meteorites, *Siberia, Shock waves, Meteorological parameters, Trajectories, Explosion effects, Physical properties, Measurement, Earthquakes

Bruzek, Anton.
A DISCUSSION OF THE SPICULES ON THE SUN. [1962] [10]p. (refs. omitted).
Order from SLA $1.10 63-10668

Trans. of Fraunhofer Institut. Mitteilungen (West Germany) no. 38 [Reprinted from Zeitschrift für Astrophysik (Germany). 1959, v. 47, no. 3, p. 191-197]

DESCRIPTORS: Sun, Physical properties, *Sunspots, Spectrographic analysis, Extraterrestrial topography.

Gurzadyan, G. A.
"LUNAR" RADIO INTERFEROMETER. [1963] [9]p. 1 ref.
Order from OTS or SLA $1.10 63-14668

Trans. of Akademiya Nauk SSSR. Doklady, 1958, v. 118, no. 6, p. 1094-1097.
Other translations are available from LC or SLA mi$1.80, ph $1.80 as 59-20192 [1959] 8p. and in German from T. I. B. $1.55.

DESCRIPTORS: *Radio interferometers, Radio astronomy, Radio waves, Ionosphere, *Moon, Extraterrestrial radio waves.

The basic concepts concerning the function of the lunar interferometer as well as the method of determining the angular dimensions of discrete sources are presented.

Isaev, S. I., Pushkov, N. V., and Gamon-Gaman, G. N.
POLAR AURORAE. 22 Apr 63, 115p. (figs. omitted). JPRS: 18822.
Order from OTS $2.50 63-21631

Trans. of mono. Polyarnye Siyaniya, Moscow, 1958, 112p.

DESCRIPTORS: *Aurorae, *Polar regions, Classification, Distribution, Magnetic storms, Solar disturbances, Line spectrum, Radio astronomy, Photomultipliers, Theory, Propagation, Radio waves, *Upper atmosphere, Spectrographic data

Contents:
Development of views on polar aurorae
Pattern of polar aurorae, their forms and classification
Geographic distribution and heights of polar aurorae
Polar aurorae and magnetic storms
Polar aurorae and solar activity
Investigation of the spectra of polar aurorae
Composition and temperature of the upper layers of the Earth's atmosphere based on aurorae data
Radio investigation of polar aurorae
Electrophotometric studies of polar aurorae
Theory of polar aurorae
Polar aurorae and propagation of radiowaves

Kotel'nikov, V. A., Gus'kov, G. Ya. and others.
RADAR PROBES OF THE PLANET MERCURY.
19 Mar 63 [8]p. 9 refs. JPRS: 18211.
Order from OTS $0.50 63-21357

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 147, no. 6, p. 1320-1323.

DESCRIPTORS: *Mercury (Planet), *Radio astronomy, Radar signals, Reflection, Measurement.

Data resulting from a radar survey of Mercury in June 1962 are summarized. The results of the radar observations do not contradict the results of measurements of the astronomical unit obtained in the radar survey of Venus in 1961, and yield a coefficient of reflection for Mercury which is close to that of the lunar surface.

Nakamura, Junji.
THE LIFE AND PROGRESS OF THE AURORA, tr. by E. R. Hope. Apr 63 [14]p. 11 refs. DSIS T 78 J.
Order from NRCC NRCC C-4367

Trans. of Kagaku (Japan) 1962, v. 32, no. 7, p. 354-361.

DESCRIPTORS: *Aurorae, *Astronomical cameras, Night photography, Terrestrial magnetism, Photographic analysis.

Peregudov, F. I.
THE PROBLEM OF SELECTING A RADAR TRANSMITTER FOR RADAR OBSERVATION OF METEOR TRAILS (K Voprosu o Vybore Peredatchika Radiolokatsionnoi Stantsii Dlya Radioissledovaniya Meteornykh Sledov) tr. by Myron Ricci. Sep 62 [5]p. 5 refs. AmMetSoc T-R-397; AD-402 367.
Order from OTS or SLA $1.10 63-19208

Trans. of Akademiya Nauk SSSR. Komissiya po Kometam i Meteoram. Byulleten', 1958, no. 2, p. 44-45.
Another trans. is available from OTS or SLA $2.60 in 63-13876, MCL-266, 20 Nov 62 [23]p.

DESCRIPTORS: *Radio astronomy, *Radar transmitters, *Meteors, Radar tracking, Astronomy.

BEHAVIORAL SCIENCES

Personnel and Training

REPORT OF THE KOREAN ACADEMY OF SCIENCES: BIOGRAPHIC DATA. 4 Apr 63 [99]p. JPRS: 18534.
Order from OTS $2.25 63-21497

Trans. from Choson Minju Chu'ui Inmin Konghwaguk. Kwahakkwan Tongho [sic] (Korea) 1962, nos. 1-4.

DESCRIPTORS: *Scientific personnel, Personnel, Biographies, *Korea.

Papazov, Branimir D. and Nikola, B.
BIOGRAPHIC DATA ON THE ACADEMICIAN ASEN KHADZHIOLOV. 13 May 63, 3p. JPRS: 19158.
Order from OTS $0.50 63-21808

Trans. from Zdraven Front (Bulgaria) 1963, 20 Jan, p. 2.

DESCRIPTORS: *Scientific personnel, *Medical personnel, Biology, Personnel, *Biographies.

Psychology

Haisch, E.
ON MUSICAL TESTING METHODS (Über Musikalische Testverfahren). [1962] 14p. 5 refs.
Order from SLA $1.60 63-10755

Trans. of Schweiz[er] Arch[iv] f[ür] Neuro[logie] u[nd] Psych[iatrie] (Germany) 1955, v. 75, p. 67-76.

DESCRIPTORS: *Music, Songs, Test methods, Emotions, Abnormal psychology, Acoustics, Sound, Psychometrics, Hearing, *Psychoacoustics, *Personality tests, Reaction (Psychology).

Kuz'min, E. S.
SOCIAL PSYCHOLOGY. 16 May 63, 7p. 16 refs. JPRS: 19226.
Order from OTS $0.50 63-21833

Trans. of #Voprosy Psikhologii (USSR) 1963 [v. 9] no. 1, p. 142-145.

DESCRIPTORS: *Psychology, Social sciences, *Behavior, Communism, Ecology, Perception, Etiology, Emotions, Personality, *Communications theory.

Le Ny, I. F.
ON THE QUESTION OF MATERIALISTIC SOCIAL PSYCHOLOGY. 20 May 63, 10p. JPRS: 19288.
Order from OTS $0.50 63-21869

Trans. of #Voprosy Psikhologii (USSR) 1963 [v. 9] no. 1, p. 146-150.

DESCRIPTORS: *Psychology, Social sciences, Reasoning, *Communism, Brain, *Perception, Etiology, Emotions, Ecology, Reaction (Psychology), *Personality, *Language, History, Economics.

Myasishchev, V. N.
PERSONALITY AND NEUROSES: [SELECTED] PORTIONS. 24 May 63, 281p. refs. JPRS: 19396.
Order from OTS $4.00 63-21908

Trans. of mono. Lichnost' i Nevrozy, Leningrad, 1960, p. 1-51, 68-119, 136-230, 282-325, 360-425.

DESCRIPTORS: *Personality, *Neuroses, Psychology, *Psychiatry, *Abnormal psychology, *Children, *Attitudes, *Brain, Physiology, *Ecology, Communism, Conditioned reflex, Behavior, *Etiology, Hypertension, *Neurology, Hospitals, *Therapy.

Contents:
Editor's foreword
Publisher's preface
Preface to the original
Introduction to the translation of book, "Personality and Neuroses"

Neimark, M. Z.
ON THE QUESTION OF EXPERIMENTAL INVESTIGATION OF PERSONALITY TREND. 23 May 63, 14p. JPRS: 19354.
Order from OTS $0.50 63-21894

Trans. of #Voprosy Psikhologii (USSR) 1963 [v. 9] no. 1 p. 3-12.

DESCRIPTORS: *Personality, *Personality tests, Behavior, Attitudes, Students.
Introductory remarks on the importance of the problem of personality in psychology and psychiatry
Working capacity and diseases of the personality
The personality and work of the abnormal child
The problem of personality and soviet psychology
The psychology of attitudes and the physiology of the brain
Problems of human psychology in the light of Pavlov's teaching on the relationship between the organism and the environment
Problems of psychology in the light of the classical Marxist-Lenist views of human attitudes
The problem of attitudes in the psychology of individual differences
The problem of psychological type in the light of Pavlov's teaching
Wants as human attitudes
The problem of human attitudes and its place in psychology
The pathogenesis of the neuroses
Modern ideas on neuroses
Hypertension and neuroses
Some problems in the theory of psychotherapy
Basic problems of the theory and practice of work therapy in psychoneurological hospitals
Prophylactic trend in Soviet neuropsychiatry
Personality and neuroses.

BIOLOGICAL SCIENCES

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 44 (BIOLOGY AND MEDICINE SERIES). 9 Jan 63 [18]p. JPRS: 17073.
Order from OTS or SLA $1.60 63-19542

Consists of abstracts of articles from selected scientific and technical journals of Bulgaria, Czechoslovakia, and Poland.

DESCRIPTORS: *Abstracts, Bibliographies, *Biology, *Medicine, Toxicology, Surgery, Pathology, Diseases, Therapy, Immunology, Nervous system, Electrocardiography, Cancer, Pharmacology, Chemical analysis, Esters, Radiation effects, Animals, Transplantation.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 172 (BIOLOGY AND MEDICINE SERIES). 16 May 63, 22p. JPRS: 19210.
Order from OTS $0.75 63-21821

Consists of abstracts of articles from selected scientific and technical journals of Czechoslovakia and Poland.

DESCRIPTORS: *Abstracts, Bibliographies, *Biology, *Medicine, *Plants (Botany), Genetics, Physiology, Education, Evolution, *Food, *Veterinary medicine, Public health, Meat, Preservation, *Pharmacology, Drugs, Containers.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 180 (BIOLOGY AND MEDICINE SERIES). 22 May 63, 10p. JPRS: 19348.
Order from OTS $0.50 63-21890

Consists of abstracts of articles from selected scientific and technical journals of Hungary.

DESCRIPTORS: *Abstracts, Bibliographies, *Biology, *Medicine, *Veterinary medicine, Plants (Botany), Surgery, Cardiovascular system.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 187 (BIOLOGY AND MEDICINE SERIES). 29 May 63, 20p. JPRS: 19465.
Order from OTS $0.75 63-21945

Consists of abstracts of articles from selected scientific and technical journals of Hungary.

DESCRIPTORS: *Abstracts, Bibliographies, *Biology, *Medicine, Chemical analysis, Drugs, Toxicology, Neurology, Surgery, Wounds and injuries, Pathology, Diet, Public health, Infants.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 188 (BIOLOGY AND MEDICINE SERIES). 29 May 63, 42p. JPRS: 19468.
Order from OTS $1.25 63-21946

Consists of abstracts of articles from selected scientific and technical journals of Bulgaria and Czechoslovakia.

DESCRIPTORS: *Abstracts, Bibliographies, *Biology, *Medicine, Pathology, Diseases, Biochemistry, Pharmacology, Children, Animals, Veterinary medicine, Food, Surgery, Physiology, Nutrition, Diagnosis, Drugs, Wounds, and injuries, Psychology, Psychiatry, Aviation medicine.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 189 (BIOLOGY AND MEDICINE SERIES). 29 May 63, 28p. JPRS: 19469.
Order from OTS $0.75 63-21947

Consists of abstracts of articles from selected scientific and technical journals of Bulgaria, Czechoslovakia, and Poland.

DESCRIPTORS: *Abstracts, Bibliographies, *Biology, *Medicine, Pathology, Children, Neurology, Pharmacology, Psychiatry, Diseases, Surgery, Physics, Physiology, Biochemistry, Veterinary medicine, Public health, Animals, Immunology.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 190 (BIOLOGY AND MEDICINE SERIES). 29 May 63, 27p. JPRS: 19470
Order from OTS $0.75 63-21948

Consists of abstracts of articles from selected scientific and technical journals of Bulgaria, Poland, Yugoslavia.

DESCRIPTORS: *Abstracts, Bibliographies, *Biology, *Medicine, Genetics, Blood, Drugs, Pharmacology, Microorganisms, Biochemistry, Radiation sickness, Diseases, Neurology, Therapy, Medical examination, Toxicology, Vaccines, Viruses, Plants (Botany), Scientific personnel.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 191 (BIOLOGY AND MEDICINE SERIES). 29 May 63, 16p. JPRS: 19489.
Order from OTS $0.50 63-21957

Consists of abstracts of articles from selected scientific and technical journals of Rumania.

DESCRIPTORS: *Abstracts, Bibliographies, *Biology, *Medicine, Vaccines, Diseases, Toxicology, Microorganisms, Immunology, *Veterinary medicine, Agriculture.

BIOGRAPHIC INFORMATION ON THREE EMINENT MEDICAL SCIENTISTS. 1 Apr 63 [8]p. JPRS: 18462.
Order from OTS $0.50 63-21462

Trans. of Khirurgiya (Bulgaria) 1962, v. 15, no. 12, p. 1118-1122.

DESCRIPTORS: *Medical personnel, *Scientific personnel, History, Pathology, Medicine, Biographies

Contents:
Georgi Yankov, Antal Babics, Teodor Todorov.

RECENT PUBLIC HEALTH AND MEDICAL ACTIVITIES IN THE USSR. 16 May 63, 65p. JPRS: 19216.
Order from OTS $1.75 63-21827

Trans. of Sovetskaya Meditsina (USSR) 1962 [v. 25] no. 9, p. 151-152; Voprosy Okhrany Materinstva i Detstva (USSR) 1962, v. 7, no. 9, p. 67-75; Kazanskii Meditsinskii Zhurnal (USSR) 1962 [v. 43] no. 5, p. 3-8; Voprosy Neirokirurgii (USSR) 1963 [v. 27] no. 1, p. 59-63; Uchenyi Meditsinskii Sovet. Byulleten' (USSR) 1962 [v. 3] no. 4, p. 45-47.

DESCRIPTORS: *Public health, *Medicine, *Vitamins, Education, *Training, *Children, *Medical personnel, Symposia, *Neurology, *Surgery, Diseases, Therapy, Medical research, Pathology, Brain, Diagnosis.

Contents:
Anniversary Meeting of the Vitaminology Research Institute of the USSR Ministry of Health, by D. E. Rozenberg
Practices in the training of pediatric personnel, by V. P. Spirina and A. P. Chernikova
Basic principles in providing postgraduates training for pediatricians in Moscow Province, by T. A. Grishina and others
The public health situation in the Tatar ASSR in the light of decisions of the Congress of the CPSU (no. 22) by R. Yu. Yarmukhamatova
All-Union Conference of Neurosurgeons, by N. Ya. Vasin
Brief news.

TRANSACTIONS OF THE INSTITUTE OF PHYSIOLOGY IMENI I. P. PAVLOV [1954] VOL. 3: TABLE OF CONTENTS. [1962] 6p. [Trans.] 6990.
Order from OTS or SLA $1.10 62-24757

Trans. of Akademiya Nauk SSSR. Institut Fiziologii. Trudy [1954] v. 3, p. 619-621.
Translations of some articles are available from SLA separately.

DESCRIPTORS: *Bibliography, *Physiology, *Pathology, Literature, Gastrointestinal system, Cardiovascular system, Respiration, Blood, Urinary system, Metabolism, Endocrine glands.

Glushkov, V. M.
THE MODELING OF THOUGHT PROCESSES.
24 Apr 63, 19p. 2 refs. JPRS: 18873.
Order from OTS $0.50 63-21662

Trans. of Priroda (USSR) 1963 [v. 52] no. 2, p. 3-13.

DESCRIPTORS: *Reasoning, *Cybernetics, Brain, Algorithms, *Coding, Automation, Machines, *Bionics, *Pattern recognition, Memory, Tests.

A semi-technical discussion involving the following topics: A model of the brain; algorithms and coding; the question of automation of scientific creativity; modeling of processes for discrimination of forms; and, tests of instructions of machines.

Kamnev, I. E. and Gordeeva, L. F.
EXCITATION OF EPITHELIAL CELLS AND TISSUES.
[1962] [12]p. 12 refs. FASEB manuscript no. S128-2.
Order from OTS or SLA $1.60 63-15995
Figs. available on loan fromOTS

Trans. of Tsitologiya (USSR) 1962, v. 4, no. 3, p. 347-353.

DESCRIPTORS: Excitation, *Epithelium, *Cells (Biology), *Tissues (Biology), *Histology, *Eye, Frogs, Biological stains, Wounds and injuries, Electric currents.

The cells of epithelial tissures respond to external stimuli (mechanical, thermal, induction current) by various morphophysiological changes. The character of these changes depends on the distance between the cell and the site of application of the agent. The range of changes observed in response to the action of the stimulus reflects the individual phases of the single process of excitation of the epithelial tissue, following their slow course. The morphophysiological changes we have described in the epithelial cells are revealed especially clearly by the use of the method of double vital staining which we have devised. (Author)

Petrov, I. R. and Filatov, A. N.
PLASMA SUBSTITUTING SOLUTIONS: BIBLIOGRAPHY, tr. by T. W. B. 29 Oct 62, 58p.
Order from OTS or SLA $5.60 63-15592

Partial trans. of mono. Plazmozameshchayushchie Rastvory, Leningrad, 1958.

DESCRIPTORS: *Bibliographies, *Blood plasma, Solutions, Surgery, Diseases, Plasma transfusions, Physiology, *Plasma substitutes.

Savchenko, M. G. and Vrono, M. S.
TRAINING OF CHILD PSYCHONEUROLOGISTS IN THE USSR. 28 June 62 [7]p. NIH no. 6-60-62.
Order from OTS or SLA $1.10 62-32141

Trans. of Voprosy Okhrany Materinstva i Detstva (USSR) n. d., n. v., no. 4, p. 82-86.

DESCRIPTORS: *Training, *Children, *Neuroses, Neurology, Psychiatry, Education, *Medical personnel, Universities, Medicine.

Vasilevskii, V. and Fedotov, Yu.
MEDICINE AND THE COSMOS. 9 Apr 63 [13]p. JPRS: 18627.
Order from OTS $0.50 63-21547

Trans. of Molodoi Kommunist (USSR) 1962 [v. 20] no. 12, p. 45-50.

DESCRIPTORS: Medicine, *Space medicine, Space biology, *Noise, Vibration, *Weightlessness, *Rhythm (Biology), Music, Physiology

Zykov, M. P.
TELEVISION MICROSCOPY IN BIOLOGY AND MEDICINE: REVIEW OF THE LITERATURE. 22 Mar 63 [7]p. 20 refs. JPRS: 18299.
Order from OTS $0.50 63-21392

Trans. of Laboratornoe Delo (USSR) 1963 [v. 9] no. 1, p. 3-5.

DESCRIPTORS: *Television cameras, *Microscopy, Biology, Medicine, *Medical equipment, Ultraviolet radiation, Microorganisms.

Anatomy and Physiology

ACTA PHYSIOLOGICA POLONICA, 1962, VOL. 13, NO. 1. 1962, 192p. PL-480 HEW.
Order from OTS $2.00 62-11063/1

Trans. of Acta Physiologica Polonica, 1962, v. 13, no. 1.

DESCRIPTORS: *Physiology, *Poland, *Uric acid, *Kidneys, Laboratory animals, *Electromyography, *Fatigue (Physiology), *Adrenal glands, Excision, *Bioelectronics, *Glycogen, Muscles, *Electric currents, *Stimulation, *Training, *Hematology, Bone marrow, Blood, *Hypotension, Amines, Fatty acids, *Nerves, Hormones, *Serotonin, *Reserpine, Brain, *Cardiovascular system, Anoxia, Blood circulation, Legs, Heart, Excitation, Rhythm (Biology), Electroencephalography, Lipids, Lymph, Thorax, Pepsins, Urine, Gastrointestinal system, Amino acids, *Albumins, Histamine, Age, Shock (Pathology), *Respiration, *Flood, Sheep, *Urea, Motor reactions, *Electrophotography, Infrared photography, *Infrared spectroscopy, *Inositols, Dosage, *Cardiac glycosides

Contents:

Tubular transport of uric acid in the nephrons of the dog, by J. Steffen and others
Electromyographic manifestations of fatigue during work of different intensity, by W. Missiuro and others
Effect of adrenalectomy on the bioelectric activity and glycogen content in rat muscle, by J. Koczocik-Przedpelska
Influence of experimental training by electric current stimulation on skeletal muscles, by A. Nowakowska
Hematological changes induced by muscular work in the bone marrow and peripheral blood of albino rats, by L. Lubanska
Analysis of the mechanism of the hypotensive action of γ-aminobutyric acid, by W. Romanowski
Studies on the central action of neurohormones. II. Action of serotonin and reserpine on the cardiovascular centres of the hypothalamus and reticular formation of the brain stem, by A. Trzebski
Effects of asphyxia on the blood flow and vascular resistance of the dog's hind limb, by J. Litwin
Studies on the influence of the S-A node on the regulation of the excitability cycle in ventricular muscle, by B. Lewartowski
Higher nervous functions in rats affected by raised or lowered serotonin levels in the brain, by E. Mietkiewski and J. Pryszczewska
Effect of serotonin on the level of lipids and lymph flow in the thoracic duct of the dog, by L. Markiewicz
Experimental studies on the pepsin and cathepsin activities of gastric juice, blood and urine, by S. Ziemlanski
Absorption of amino-acids in the gastrointestinal tract after administration of ^{131}I-albumin, by T. Horzela and others
Studies on the protective effect of electric current in histamine shock in guinea pigs, by A. Gromek and M. Ojak

Dependence of pharmacodynamic response on age. I. Effect of pyramidon on brain tissue respiration in young and adult rats, by S. Kurzepa and A. Rutkowska
Utilization of energy producing food components in the alimentary tract of sheep, by C. Felinska and L. Felinski
Influence of urea on the motor activity of the alimentary tract in sheep, by L. Felinski
A method of photoelectrical record of mechanical motions, by I. Omelianowicz
Infrared spectrophotometric determination of m-inositol, by Z. Szymanowska
Biological potency determination of digitalis purpurea in relation to weight of pigeons and season, by I. Gawecka and R. Wojcik

Barskii, I. Ya., Brumberg, V. A., and Brumberg, E. M.
THE ULTRAVIOLET FLUORESCENCE OF MUSCLES. 20 May 63, 4p. 8 refs. JPRS: 19287.
Order from OTS $0.50 63-21868

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 147, no. 2, p. 474-476.

DESCRIPTORS: *Ultraviolet radiation, Fluorescence, *Muscles, Tissues (Biology), Cells (Biology), Histological techniques, Biological stains, *Fluorescent dyes, Muscle proteins, Microbiology, Histology

Belousev, L. V.
CELL MULTIPLICATION AND THE GROWTH OF HYDROID POLYPS. 22 Mar 63 [15]p. (illus. omitted) 10 refs. JPRS: 18293.
Order from OTS $0.50 63-21389

Trans. of Zhurnal Obshchei Biologii (USSR) 1961 [v. 22] no. 4, p. 281-291.

DESCRIPTORS: *Cells (Biology), *Reproduction (Physiology), Growth, Aquatic animals, Mitosis, Tissues (Biology).

The following problems are considered: (1) What are the sources of the new formation of mycepithelial cells (m.e.c.), what part do differentation processes of the m.e.c. from interstitial cells play in adding to the cell content, and what part is thereby played by mitotic division of the m.e.c. themselves? (2) How does proliferative activity change during the course of development of the hydranth? (3) What is the relationship between cell division and the directed growth of the hydranth?

Efuni, Yu. N. and Karyakin, A. V.
SPECTRAL STUDY OF THE LUMINESCENCE OF THE TISSUES OF THE OTORHINOLARYNGOLOGICAL ORGANS. 20 May 63, 6p. 9 refs. JPRS: 19285.
Order from OTS $0.50 63-21866

Trans. of #Biofizika (USSR) 1962, v. 7, no. 4, p. 480-483.

DESCRIPTORS: *Spectroscopy, *Luminescence, *Tissues (Biology), Throat, Eye, Nose, Ear, *Otorhinolaryngology, Biological strains, Histological techniques, Pathology

Tissues of the ear, nose and throat (both normal and pathologic) absorb fluorescein to differing degrees. A correlation has been discovered between visually observed luminescence upon examination of the ear, nose and throat and the amount of luminesceing dye in the tissues. Laboratory staining of pieces of tissue produces the same spectral characteristics as does intravital staining, which also permits studies of the secondary luminescence of tissues under laboratory conditions for the purpose of determining specific dyes for one or another type of pathologically altered tissue. (Author)

Gol'dberg, I. M.
THE EXERCISABILITY OF TACTILE SENSITIVITY. 17 May 63, 7p. JPRS: 19252.
Order from OTS $0.50 63-21845

Trans. of #Voprosy Psikhologii (USSR) 1963 [v. 9] no. 1, p. 35-40.

DESCRIPTORS: *Sensory mechanisms, Vision, *Touch, Adaptation (Physiology), Mental disorders

Machabeli, M. S.
THE BLOOD COAGULATION SYSTEM: [SELECTED] PORTIONS. 16 May 63, 14p. JPRS: 19219.
Order from OTS $0.50 63-21830

Trans. of mono. Sistema Svertyvaniya Krovi, Tbilisi, 1961, p. 186-189, 273-275.

DESCRIPTORS: *Blood coagulation, Hematology, *Blood platelets, Prothrombin, Enzymes, *Fibrinogen, *Fibrin, Anticoagulants, Blood chemistry.

Contents:
Chap. 4: The adopted working hypothesis (partial)
Table of contents.

Prokof'eva-Bel'govskaya, A. A.
URGENT PROBLEMS IN THE ORGANIZATION OF RESEARCH ON CYTOLOGY IN THE LIGHT OF THE RESOLUTIONS OF THE CENTRAL COMMITTEE OF THE CPSU [AND] NORMAL HUMAN CHROMOSOMES. 7 May 63, 33p. 74 refs. JPRS: 19091.
Order from OTS $1.00 63-21773

Trans. of Tsitologiya (USSR) 1963, v. 5, no. 1, p. 3-23.

DESCRIPTORS: Scientific organizations, Scientific research, *Histology, *Chromosomes, Cells (Biology), *Man.

Stannius, Hermann.
EXPERIMENTS ON THE FROG HEART. [1962] 8p.
Order from SLA $1.10 63-10126

Trans. of Archiv für Anatomie, Physiologie und Wissenschaftliche Medicin (Germany) 1852, v. 19, p. 85-92.

DESCRIPTORS: Medical research, Amphibians, *Heart, Nerves, Blood vessels.

Strakhov, A. B.
ELECTROENCEPHALOGRAPHIC CHANGES IN PROLONGED ACTION OF NOISE (Elektroentsefalograficheskie Izmeneniya pri Dlitel'nom Deistvii Shuma) tr. by H. O'C. 24 Apr 63, 4p. (figs. omitted) 13 refs. I-2340.
Order from OTS $0.50 63-11615

Trans. of #Byulleten' Eksperimental'noi Biologii i Meditsiny (USSR) 1962 [v. 54] no. 7, p. 11-13.

DESCRIPTORS: *Electroencephalography, *Noise, Adaptation (Physiology), High frequency, Stimulation.

Biochemistry

ABOUT THE SCIENTIFIC ACTIVITY, STATUS AND TRAINING OF CADRES OF THE INSTITUTE OF CHEMISTRY OF NATURAL COMPOUNDS (INSTITUT KHIMI PRIRODNYKH SOEDINENII). 10 Oct 62, 3p. TRANS. A-1369.
Order from OTS or SLA $1.10 62-33561

Trans. of Akademiya Nauk [SSSR]. Vestnik, 1962, v. 32, no. 7, p. 95.

DESCRIPTORS: *Biochemistry, *Scientific organizations, Scientific research, Training.

ACTA BIOCHIMICA POLONICA, 1963, VOL. 10, NO. 2, P. 125-241. 1963, 1v. PL-480 HEW.
Order from OTS $1.25 63-11406-2

DESCRIPTORS: *Biochemistry, Biosynthesis, *Maleic acid, *Kidneys, *Succinates, *Amines, Rats, Amino acids, Salts, *Hydrolases, Gastrointestinal system, *Cholinesterase, Pancreas, Valeric acids, *Transferases, Enzymes, *Plants (Botany), *Pyrimidines, Metabolism, Mice, Embryos, Cells(Biology), *Viruses, Neoplasms, *Phosphates, *Phospholipids, Tissues (Biology), Diet, Starvation, Nucleosides, *Nucleotides, Bacteria, *Yeasts, Azoles, Glycerols, Histidine, Halogenation, *Aderosine phosphates, *Esters, Ethyl radicals, Ethanols

Compounds:
Effect of maleic acid on the kidney. III. Succinate as hydrogen donor in the reductive amination in rat kidney, by J. Rogulski and S. Angielski
Effect of maleic acid on the kidney, IV. Synthesis of amino acids in the kidney of maleate-treated rats, by J. Rogulski and S. Angielski
Studies on hydrolases of digestive juices. VIII. Cholinesterase of dog pancreatic juice, by H. Szafran and Z. Szafran
Ornithine carbamoyltransferase in higher plants, by K. Reifer and others
[^{14}C] Carbamoyl-β-alanine as precursor of pyrimidines in higher plants, by J. Buchowicz and others
The metabolism of mouse embryo cells grown in vitro and infected with the oncogenic virus SE polyoma, by M. Guminska and others
Incorporation of [^{32}p]orthophosphate into phospholipids of frog tissues during feeding and starvation, by P. Wlodawer and H. Dominas
Pyrimidine nucleoside hydrolase in Thermobacterium acidophilum, by C. Janion and S. Lovtrup
Formation of uracil nucleotides in Thermobacterium acidophilum, by C. Janion and S. Lovtrup
Adaptation of yeast to 3-amino-1, 2, 4-triazole, by T. Klopotowski
Imidazoleglycerol accumulation by yeast resulting from the inhibition of histidine biosynthesis by 3-amino-1, 2, 4-triazole, by T. Klopotowski and D. Hulanicka
Preparation of poly-5-fluorouridylic acid and the properties of halogenated poly-uridylic acids and their complexes with poly-adenylic acid, by W. Szer and D. Shugar
The transfer of the phosphoric ester of N, N-diethylaminoethanol from its cytidylyl derivative into phospholipids of rat and chicken tissue homogenates, by T. Chojnacki and T. Korzybski

VITAMIN SOURCES AND THEIR UTILIZATION: COLLECTION 4. VITAMIN P, ITS PROPERTIES AND USES, tr. by Michael Artman. 1963, 216p. 423 refs. PL-480 Agr.
Order from OTS $2.25 63-11074

Trans. of mono. Vitaminnye Resursy i Ikh Ispol'zovanie: Vitamin P-Ego Svoistva i Primenenie, Moscow, 1959 [282p.].

DESCRIPTORS: *Vitamins, Food, *Vitamin P, *Ascorbic acid, *Tannic acids, Reduction (Chemistry), Phenols, Regeneration, Physiology, *Vitamin B complex, *Anemia, Eye, Pharmacology, *Catechuic acids, Tolerances (Physiology), Tea, *Capillaries, X-rays, *Atherosclerosis, Cereals, Biological assay, Therapy, Children, Permeability, *Hypertension, Diseases, *Skin, Temperature, *Radioprotective agents.

Contents:
Vitamin P and its uses, by M. N. Zaprometov
Chemical and functional interrelationships between vitamin C and substances with vitamin P activity, by E. F. Shamrai and others
Effect of tannins on the reduction of dehydroascorbic acid in vivo, by V. A. Nikonova
Studies on biological activity of polyphenols from conifer needles, by N. S. Verkhratskii
The effect of "galascorbin" on regeneration of animal tissues, by E. F. Shamrai and T. V. Fetisova
Simultaneous administration of vitamins P, C and B_1, by E. F. Shamrai and others
The effect of rutin on blood composition of guinea pigs and rabbits suffering from anemia, by A. Kh. Siim
Physiological action of substances possessing vitamin P activity, by N. N. Berezovskaya
Studies on the physiological effect of substances possessing vitamin P activity, by N. S. Yarusova and others
The effect of vitamin P on the permeability of vessels of the anterior eye chamber in rabbits, by V. I. Pevzner
Some data on the importance of vitamin P to the organism, by E. A. Kraiko
Pharmacological properties of vitamin P preparations (catechin complexes) from tea leaves, by G. S. Koroza
Nontoxicity of high doses of vitamin P (catechin complex) in long-term experiments, by M. N. Zaprometov and others
The effect of tea catechins (prepared from green tea leaves) on the permeability and resistance of rabbit

capillaries following total body x-ray irradiation, by N. I. Arlashchenko
Studies on the protective effect of vitamin P and vinillin in radiation injuries, by V. A. Sondak and E. P. Gracheva
The effect of vitamin P and C on the development of experimental atherosclerosis, by V. S. Smolenskii and others
Biological methods of assaying vitamin P activity of certain substances, by N. N. Erofeeva
Biological assay of substances possessing vitamin P activity, by N. S. Yarusova and others
Biological method for assaying vitamin P activity, by G. I. Yurtaev
Methods for isolation and determination of substances possessing vitamin P activity, by G. A. Fedorova
Determination of rutin content in buckwheat, by I. K. Murri
Determination of vitamins P and C in tablets and syrup-filled dragees containing catechin complex and ascorbic ascorbic acid, by M. N. Zaprometov and others
Production of vitamin P from tea leaves, by E. V. Agapova
Methods for the preparation of rutin (vitamin P) from the green mass of buckwheat, by M. F. Shakhova
The problem of the therapeutic effect of vitamin P, by N. F. Pankratova
The use of vitamin P (from tea leaves) in capillary damage in children, by R. I. Litvak and R. Sh. Shklovskaya
The effect of vitamin P (catechin complex from tea leaves) on capillary pearmeability, by V. A. Sondak and A. I. Ruderman
Vitamin P in hypertension, by D. E. Dzheims-Levi
The use of vitamin P (catechin complex) in some skin diseases, by M. A. Rozentul' and others
Effect of vitamin P (catechin complex) on capillary resistance in workers of hot factory shops, by E. A. Kraiko
Comparative studies on the therapeutic effect of vitamin P preparation-citrin and catechin complex, by E. K. Afanas'eva and V. G. Smagin.

Kakyashvili, D. S.
SOME BIOCHEMICAL DATA OBTAINED ON EXAMINATION OF PERSONS OF ADVANCED AGE (Nekotorye Biokhimicheskie Dannye, Poluchennie pri Obsledovanii Lits Starcheskogo Vozrasta). 19 Mar 63, 9p. 1 ref. NIH no. 3-29-63.
Order from OTS or SLA $1.10 63-19111

Trans. of Akademiya Nauk Gruzinskoi SSR [Tiflis]. Soobshcheniya, 1960, v. 25, no. 4, p. 417-424.

DESCRIPTORS: *Age, Man, *Blood chemistry, Quantitative analysis, Prothrombin, Proteins, Albumins, Cholesterol, Phospholipids.

Biochemical data obtained on examination of persons of advanced age revealed a higher cholesterol level; in some of them an increased prothrombin index was found, also an increased lecithin content, an increased total protein, and also an increased albumin content. In persons of the second age group (90 - 99), as compared to those of the first age group (80-89), the changes mentioned were more pronounced. (Author)

Kuchaeva, A. G. and Kochankov, V. G.
GIBBERELLINS AND GIBBERELLIN-LIKE SUBSTANCES. 29 Nov 61 [5]p. JPRS: 11379.
Order from OTS or SLA $1.10 63-19541

Trans. of Akademiya Nauk SSSR. Vestnik, 1961 [v. 31] no. 4, p. 132-133.

DESCRIPTORS: *Plants (Botany), *Growth substances, Biochemistry, *Conferences, Reports.

Summaries are given of some of the papers presented at a conference on gibberellins and gibberellin-like substances conducted by the Department of Biological Sciences of the Academy of Sciences USSR, and the Biological-Soil Faculty of the Moscow University, January 1961.

Kurasawa, H., Saito, S. and others.
AN ENZYME IN ASPERGILLUS ORYZAE WHICH SYNTHESIZES A NONREDUCING OLIGOSACCHARIDE FROM SUCROSE. PT. 4. RELATION BETWEEN THE ENZYME SYNTHESIZING AN OLIGOSACCHARIDE FROM SUCROSE AND SO-CALLED SACCHARASE, I. [1963] 8p.
Order from ATS $9.75 ATS-18Q67J

Trans. of Nihon Nogei-Kagakkai Shi (Japan) 1955, v. 29, no. 3, p. 211-215.

DESCRIPTORS: *Enzymes, *Molds (Organisms), Invertase, Sucrose, Saccharides.

Müller, R.
OBJECTIVE ESTIMATION OF THE END POINT OF FERMENTATION IN TOBACCO. Nov 62, 6p. 4 refs.
Order from SLA $1.10 63-10201

Trans. of [die] Nahrung (West Germany) 1962, v. 6 [no. 2] p. 175-179.

DESCRIPTORS: *Fermentation, *Tobacco, Oxygen, *Plants (Botany), Growth, Temperature, Moisture, Storage, Enzymes.

Experiments were carried out in order to test the usefulness of the "oxygen method" for the indication of the end point during a technical fermentation process of tobacco, which provide information on the factors influencing the "oxygen method". In this respect, consideration was given to the state of ripeness of the leaves on the plant, the effect of temperature on tobacco leaf material having varying moisture contents, storage of unfermented leaf tobacco, as well as the pretreatment of the tobacco in preparation for its fermentation. Different processes of technical fermentation were supervised by means of the "oxygen method" on homegrown tobaccos for cut material as well as on selected, not completely fermented imported tobaccos, which were subjected to an after-fermentation. The results obtained during this experiment are described in detail. (Author)

Parthier, Benno.
INVESTIGATIONS ON THE AMINO ACID INCORPORATION INTO THE LEAF PROTEINS OF TOBACCO. [1962] 37p. 48 refs.
Order from SLA $3.60 63-10192

Trans. of Flora; [oder, Allgemeine Botanische Zeitung] (East Germany) 1961, v. 151, p. 368-397.

DESCRIPTORS: *Amino acids, *Proteins, *Tobacco, *Plants (Botany), Growth, *Labeled substances, *Glycines, Tyrosine, Methionine, Lysines, Phenylalanine, Glutamic acid, Light.

Protein synthesis and aminoacid turnover in tobacco leaf at different stages of development were investigated by means of ^{14}C-labelled aminoacids, particularly 1-^{14}C-glycine but, in addition, also 1-^{14}C-tyrosine, 1-^{14}C-methionine, 1-^{14}C-lysine, 2-^{14}C-phenylalanine, 2-^{14}C-glutamic acid, and 5-^{14}C-methionine. (Author)

Volkova, R. I. and Godovikov, N. N.
CHEMICAL STRUCTURE AND BIOLOGICAL ACTIVITY OF ORGANOPHOSPHORUS INHIBITORS OF CHOLINESTERASE. 24 Apr 63, 17p. 22 refs. JPRS: 18872.
Order from OTS $0.50 63-21661

Trans. of Voprosy Meditsinskoi Khimii (USSR) 1961, v. 7, no. 3, p. 250-258.
Another trans. is available from OTS or SLA $1.60 as 61-28723, JPRS-10397, 29 Sep 61 [16]p.

DESCRIPTORS: *Cholinesterase, Inhibition, *Phosphorus compounds, Organic compounds, Molecular structure, Biochemistry, Antioxidants.

Botany

Dokhman, G. I.
ON THE SYSTEM OF DIAGNOSTIC CHARACTERS OF VEGETATIONAL UNITS (O Sisteme Diagnosticheskikh Priznakov Edinits Rastitel'nosti) tr. by A. Neal. Report to Delegates Congress of the All-Union Botanical Society, 1957. [1962] [31]p. (foreign text included) 13 refs. [CSIRO] Trans. no.5601.
Order from OTS or SLA $3.60 63-13604

Trans. of Botanicheskii Zhurnal (USSR) 1960, v. 45, no. 5, p. 637-648.

DESCRIPTORS: *Taxonomy, *Ecology, Soils, *Plants (Botany), Morphology.

According to the author's viewpoint, diagnostics of vegetational units based on a wide diversity of characters is indispensable for the elaboration of the natural classification of vegetation. Accordingly the author proposes a system of phytocoenological and ecological characters and of their various combinations for the diagnosis of vegetational units of different rank. Particular importance of the species composition as a diagnostic character is emphasized and necessity of a limited use, in the diagnostics, of dominant species, not always revealing the specificity of a given plant unit, is pointed out. (Author)

Fedorov, V. D.
THE CELL DYING MECHANISM IN PROLIFERATING CULTURES OF THE BLUE-GREEN ALGAE ANABAENA VARIABILIS AND AMORPHONOSTOC PUNCTIFORME. 20 May 63, 8p. JPRS: 19286.
Order from OTS $0.05 63-21867

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 144, no. 6, p. 1380-1383.

*DESCRIPTORS: *Cells (Biology), *Necrosis, *Algae, Growth, Culture media, Ecology, Marine biology, Microorganisms, Plants (Botany), Microbiology.

Kabanov, N. M.
HIGHER WATER PLANTS AS RELATED TO POLLUTED CONTINENTAL BODIES OF WATER. 17 May 63, 9p. 7 refs. JPRS: 19251.
Order from OTS $0.50 63-21844

Trans. of Vsesoyuznoe Gidrobiologicheskoe Obshchestvo. Trudy (USSR) 1962, v. 12, p. 410-415.

DESCRIPTORS: *Plants (Botany), *Marine biology, Water, Contamination, Dams, *Parasites, Rivers, Waste (Sanitary Engineering), Temperature, Purification, *Water supplies, Adaptation (Physiology).

Lebedenko, L. A.
COMPARATIVE ANATOMICAL ANALYSIS OF THE MATURE WOOD OF ROOTS AND STEMS OF SOME WOODY PLANTS (Sravnitel'no-Anatomicheskii Analiz Drevesiny Kornei i Stvolov Nekotorykh Drevesnykh Rastenii). Dec 62 [14]p. 58 refs. RTS-2194.
Order from OTS or SLA $1.60 63-15961

Trans. of Akad[emiya] Nauk SSSR. Inst[itut] Lesa i Drevesiny [Krasnoyarsk]. Trudy, 1962, v. 51, p. 124-134.

DESCRIPTORS: *Anatomy, Cells (Biology), *Wood, *Trees, Growth, Plants (Botany).

Masyuk, N. P.
TWO NEW SPECIES OF CHARACIACEAE ALGAE (Dvi Novi Kharatsievi Vodorosti). Apr 63 [5]p. RTS-2210.
Order from OTS or SLA $1.10 63-19130

Trans. of Ukrayins'kyi Botanichnyi Zhurnal (USSR) 1961, v. 18, no. 3, p. 78-80.

DESCRIPTORS: *Algae, Plankton, Cells (Biology).

Vereshchagin, A. G.
THE METABOLISM OF FAT RESERVES IN PLANTS. [1962] [20]p. 147 refs.
Order from OTS or SLA $1.60 63-15924

Trans. of Uspekhi Sovremennoi Biologii (USSR) 1958, v. 45, [no. 1] p. 114-129.

DESCRIPTORS: *Plants (Botany), *Seeds, *Fats, Metabolism, Theory, *Fatty acids, Biosynthesis, Minerals, Vitamins, Bibliographies.

A survey of the literature.

General Biology

Kozhov, M. M. and Tyumentsev, N. V.
THE BIOLOGICAL SEQUELA OF THE LEVEL VARIATIONS IN LAKE BAIKAL. 27 Mar 63 [11]p. 10 refs. JPRS: 18383.
Order from OTS $0.50 63-21432

Trans. of Moskovskoe Obshchestvo Ispytatelei Prirody. Byulleten' Otdel Biologicheskii (USSR) 1961, v. [36]66, no. 3, p. 32-39.

DESCRIPTORS: *Lakes, Marine biology, *Ecology, Hydroelectric power systems, Water supplies.

Lyubarskii, K. A.
HISTORY, NATURE, AND THEORY OF ASTROBIOLOGY. 16 Apr 63 [19]p. 16 refs. JPRS: 18724.
Order from OTS $0.50 63-21584

Trans. of mono. Ocherki po Astrobiologii (Essays on Astrobiology) Moscow, 1962, chaps. 1, p. 5-11 and chap. 7, p. 104-111.

DESCRIPTORS: *Exobiology, History, Theory, *Planets, Mars, Venus, Planetary atmospheres, Terrain, *Plants (Botany), Morphology.

Medical Specialties and Equipment

Akulinichev, I. T.
A HANDBOOK FOR VECTORCARDIOSCOPY. 2 May 63, 182p. 71 refs. JPRS: 19030.
Order from OTS $3.00 63-21740

Trans. of mono. Prakticheskie Voprosy Vektorkardioskopii, Moscow, 1960, 214p.

DESCRIPTORS: Handbooks, *Vectorcardiography, Heart, Medical equipment, Diseases, Standards, Bioelectronics, Electrocardiography, Diagnosis.

Contents:
The vector and the vectogram
The electrical vectors of the heart
Vectorcardiography
The physical basis of vectorcardiography
The model of the electrical field
The law of signs and the polarity of the vectorcardiogram
The system of leads for biovoltages in vectorcardiography
The projection of a vectorcardiogram
The precardial system of vectorcardiography
The criterion of reliability and the questions of vectorcardiography standardization
Analyzing and reading vectorcardiograms
A normal vectorcardiogram
The electrocardiogram and the vectorcardiogram
The vectorcardiogram with diffuse changes of the myocardium
The vectorcardiogram with hypertrophies of the ventricular myocardium
The vectorcardiogram with coronary insufficiency and myocardial infarct
The vectorcardiogram and the electrocardiogram with focal changes of the myocardium
The diagnostic significance of vectorcardiography
Technical questions of vectorcardioscopy
Soviet vector-electrocardioscopes
The use of the vectorcardioscope

Hense, Heinrich.
RADIOACTIVE MEDICINE CARRIER MATERIAL, tr. by J. B. 9 Jan 63, 2p.
Order from OTS or SLA $1.10 63-15437

Trans. of Austrian patent 125,931, cl. 30f, appl. 5 July 30, beginning of pat. term 15 July 31, pub. 28 Dec 31 (priority of appl. in Germany 21 Sep 29 claimed).

DESCRIPTORS: *Radioactivity, *Medicine, Vehicles, Foam rubber, *Materials.

Mishin, L. N.
APPARATUS FOR CORRELATIVE ANALYSIS OF PHYSIOLOGICAL PROCESSES. 25 Apr 63, 10p. JPRS: 18899.
Order from OTS $0.50 63-21673

Trans. of Meditsinskaya Promyshlennost' (USSR) 1963 [v. 17] no. 2, p. 43-49.

DESCRIPTORS: Physiology, Analysis, Circuits, *Medical equipment, *Bioelectronics, Recording systems.

A description of a complex of instruments for the recording of autocorrelative and mutually-correlative functions of physiological processes. These instruments automatically calculate the correlative function.

Perel'mutr, A. S.
MODERN INHALATION EQUIPMENT (Sovremennaya Ingalyatsionnaya Apparatura). 11 Jan 63, 21p. (figs. omitted) 7 refs. Trans. V-1814.
Order from OTS or SLA $2.60 63-15462
figs. available on loan from OTS

Trans. o Meditsinskaya Promyshlennost' SSSR, 1958 [v. 12] no. 7, p. 10-20.

DESCRIPTORS: Medical equipment, *Aerosols, Drugs, Atomization, Particles, *Inhalation immunization.

Rozenfel'd, I. I.
PRINCIPLES AND METHODS OF PLANNING PUBLIC HEALTH SERVICES, PT. 3. PLANNING AND ALLOCATION OF MEDICAL PERSONNEL IN PUBLIC HEALTH SERVICES, tr. by M. Roublev. 1963, 139p. PL-480 HEW.
Order from OTS $1.50 63-11070

Trans. of mono. Osnovy i Metodika Planirovaniya Zdravookhraneniya; Planirovanie Potrebnosti Zdravookhraneniya vo Vrachebnykh Kadrakh, Moscow, 1961, [202p.].

DESCRIPTORS: *Medical personnel, *Public health, Medicine, Scientific organizations, Standards.

Sergeev, A. A.
OUTLINES ON THE HISTORY OF AVIATION MEDICINE: [SELECTED PARTS]. 9 May 63, 54p. JPRS: 19125.
Order from OTS $1.50 63-21794

Trans. of mono. Ocherki po Istorii Aviatsionnoi Meditsiny, Moscow/Leningrad, 1962, p. 206-232, 289-300.

DESCRIPTORS: History, *Aviation medicine, *Medicine, Military medicine, Medical personnel, *Scientific research, Education, Textbooks.

Contents:
Chap. 9: Aviation medicine in the USSR during the period of World War II
List of names
Table of contents.

Microbiology

MICROBIOLOGY, 1962, VOL. 31, NO. 6: [SELECTED] TRANSLATIONS. 29 May 63, 36p. 56 refs. JPRS: 19492.
Order from OTS $1.00 63-21960

Trans. of #Mikrobiologiya (USSR) 1962, v. 31, no. 6, p. 1102-1117, 1122-1128.

DESCRIPTORS: *Microorganisms, *Biology, *Fertilizers, *Bacteria, Culture media, *Algae, Light, Cells (Biology), Mitosis, History, *Microscopes, Microscopy.

Contents:
On the advisability of using bacterial fertilizers, by M. T. Kvaratheliya
The role of synchronous cultures in the biology of chlorella and their practical use, by S. V. Goryunova and others
Soviet studies on the history of the microscope and microscopic research, by A. I. Metelkin.

Gruia, Mignon.
THE INSTITUTE OF INFRAMICROBIOLOGY OF THE RUMANIAN ACADEMY. 1 Apr 63 [8]p. JPRS: 18463.
Order from OTS $0.50 63-21463

Trans. of Sanatatea (Rumania) 1963, no. 2, p. 12-13.

DESCRIPTORS: *Microorganisms, Infrared equipment, *Viruses, Training, Biochemistry, Neoplasms, Diagnosis, Medical equipment, Medical research, Communicable diseases, Scientific organizations, Rumania.

Karapetyan, A. E.
A METHOD OF CULTIVATION OF LAMBLIA (Metodika Kul'tivirovaniya Lamblii). [6 Feb 61] 6p. (figs. omitted) 11 refs.
Order from OTS or SLA $1.10 63-10931

Trans. of Tsitologiya (USSR) 1960, v. 2 [no. 3] p. 379-384.

DESCRIPTORS: Growth, *Culture media, Fungi, *Zoomastigophorea, Intestines, Diseases, Physiology, Cells (Biology), *Microorganisms, Biochemistry, Parasites.

Lamblia (Giardia) is fairly often found with yeast-like fungi of the genus Candida in the intestine of man. Three cultures of Lamblia intestinalis with Candida guilliermondi were grown on chicken fibroblasts. The cultures of Lamblia did not develop without the yeast-like fungi. This bears out the synergistic relationship between these organisms. The physiological and biochemical properties of Lamblia can be studied in culture. (Author)

Krasil'nikov, N. A.
GENERAL PRINCIPLES IN CLASSIFYING ANTIBIOTIC-PRODUCING ACTINOMYCES. [1963] [38]p. 23 refs. FASEB manuscript no. S 205-2.
Order from OTS or SLA $3.60 63-19381

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Biologicheskaya, 1962 [v. 27] no. 4, p. 576-591.

DESCRIPTORS: Classification, *Antibiotics, Taxonomy, *Actinomyces, Spores, Culture media, *Biological assay, Growth, Biological stains.

Mikhailov, I. F. and Lavrent'ev, N. I.
ON THE STAINING OF PARAAGGLUTINATING E. COLI STRAINS WITH FLUORESCENT SERA OF DIFFERENT SPECIFICITY. 20 May 63, 8p. 5 refs. JPRS: 19280.
Order from OTS $0.50 63-21861

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1961 [v. 32] no. 8, p. 74-78.

DESCRIPTORS: *Biological stains, Agglutination, *Escherichia, Bacteria, Microorganisms, *Fluorescent dyes, Serum, Antigens and antibodies, Immune serums, Identification

Paraagglutinizing E. coli strains, both isolated naturally and obtained experimentally, were able in different degrees to adsorb serum proteins of various specificity. In staining E. coli parastrains with fluorescent sera of different specificity (through the direct and indirect method), microbe cell fluorescence of differing structural character and intensity was observed. In a number of cases bright parastrain fluorescence was noted that was indistinguishable from that of the pathogenic bacteria of the intestinal group processed by homologous serum.

Svanbaev, S. K.
COCCIDIA OF RODENTS OF CENTRAL KAZAKHSTAN (K Poznaniyu Fauny Koktsidii Gryzunov Tsentral'nogo Kazakhstana). [1963] [4]p. 3 refs.
Order from OTS or SLA $1.10 63-10934

Trans. of Akad[emiya] Nauk Kazakh[skoi] SSR [Alma-Ata]. Institut Zoologii. Trudy, 1958, v. 9, p. 183-186.
Another trans. is available from LC or SLA mi$1.80, Ph$1.80 as 60-16931 [1960] [4]p.

DESCRIPTORS: *Coccidia, *Rodents, Protozoa, Microorganisms, Morphology.

Svanbaev, S. K.
THE COCCIDIAL FAUNA OF WILD UNGULATES OF KAZAKHSTAN (Fauna Koktsidii Dikikh Kopytnykh Zhivotnykh Kazakhstana). [1963] 13p. (fig. omitted) 11 refs.
Order from OTS or SLA $1.60 63-10936

Trans. of Akad[emiya] Nauk Kazakh[skoi] SSR [Alma-Ata]. Institut Zoologii. Trudy, 1958, v. 9, p. 187-197.

DESCRIPTORS: *Coccidia, Animals, *Ungulates, Protozoa, Microorganisms, Spores, Morphology, Sheep, Goats, Infections.

Eight species of Eimeria and one of Isospora were found in wild ungulates of Kazakhstan. Two new species, I. capreoli and E. saiga are described. New hosts are reported for six species. E. scabra and E. debliecki in the wild boar, E. ninae kohl-jakimov in the gazelle and the Siberian goat, E. intricata in the argali, E. parva in the Siberian goat, and E. faurei in the Siberian goat and Saiga antelope. Also this is the first time E. faurei and E. ninae kohl-jakimov have been reported in the argali from Kazakhstan. It was found, by comparing the morphology of the oocysts, that the coccidia of wild ungulates are the same as those of domestic animals with the exception of the following: I. capreoli was found only in roe deer, E. saiga only in antelopes, and E. elegans only in antelopes and gazelles. It is, therefore, possible for cross-transmission of coccidia to occur between wild and domestic animals. Since wild ungulates may be reservoir hosts, it is necessary to consider them as a source of infection for domestic animals when determining prophylactic measures. (Author)

Svanbaev, S. K.
A NEW SPECIES OF COCCIDIA IN TURKEYS (Novyi vid Koktsidii u Indeek). 9 Feb 61 [3]p. (fig. omitted) 4 refs.
Order from OTS or SLA $1.10 63-10935

Trans. of Akad[emiya] Nauk Kazakh[skoi] SSR [Alma-Ata]. Institut Zoologii. Trudy, 1955, v. 3, p. 161-163.

DESCRIPTORS: *Coccidia, *Turkeys, Protozoa, Microorganisms.

Pathology

ACTA MEDICA IUGOSLAVICA, 1962, VOL. 16, NO. 1. 1963, 86p. 193 refs. PL-480 HEW.
Order from OTS $0.75 62-11760/1

Trans. of Acta Medica Iugoslavica, 1962, v. 16, no. 1, p. 1-119.

DESCRIPTORS: *Medicine, Pathology, *Yugoslavia, Blood serum, Hepatitis, Morphine, *Histamine, Tissues (Biology), Arsenic compounds, *X-rays, *Regeneration, Cartilage, *Blood proteins, Infants, *Hypothermia, *Adrenal cortex, *Cancer, Lungs, Codeine, *Narcotics, *Carbon tetrachloride, Dicumarol, *Coumarins, Oils

Contents:
The significance of serum iron and copper estimation in the differential diagnosis of jaundice, by L. Kallai and others
The effect of prolonged treatment with morphine on intestinal propulsion in rats, by B. Banic and M. Medakovic
The effect of arsenous trioxide on the histamine content of the tissues, by S. Hukovic and P. Stern
A study of the effects of sublethal X-ray doses on the regeneration of hyaline cartilage, by J. G. Cankovic and D. Mrsevic
Blood protein patterns in infants affected by erythroderma desquamativum, by D. Korac and others
The effect of repeated deep hypothermia on the content and distribution of ascorbic acid in the adrenal cortex of the rat, by B. Neskovic and others
A contribution to the pathogenesis of a broncho-arterial fistula due to penetration of a non-irradiated bronchogenic carcinoma into a branch of the pulmonary artery by M. Leposavic and V. Kanjuh
The effect of carbon tetrachloride upon the analgetic action of codeine in rats, by B. Banic and M. Medakovic
Induction of dicumarol and marcoumar therapy with a single initial dose, by L. Popovic and Z. Vlahcevic
A contribution to the pathogenesis of acne caused by mineral oils, by T. Salamon

ARCHIVES OF IMMUNOLOGY AND EXPERIMENTAL THERAPY, 1962, VOL. 10, NO. 3 (Archivum Immunologiae et Therapie experimentalis). 1962, 809p. PL-480 HEW.
Order from OTS $3.50 62-11069/3

English ed. of [Archiwum Immunologii i Terapii Doswiadczalnej] (Poland) 1962, v. 10, no. 3.

DESCRIPTORS: *Immunology, *Therapy, *Fibrin, *Thrombin, Elasticity, Photographic analysis, *Blood coagulation, Ions, *Oxidoreductases, Blood serum, Proteins, Enzymes, *Antibodies, *Reticuloendothelial system, Leukocytes, *Klebsiella, Amino acids, Carboxylases, Potassium compounds, Cyanides, *Fungicides, *Streptomycins, *Staphylococcus, Diphtheria, *Toxins and antitoxins, Embryos, Cells (Biology), Paper chromatography, *Prosthetics, Plastic surgery, Blood vessels, Drugs, *Bioelectronics, Ear, Acoustics, *Psychotropic agents, *Glycogen, Muscles, Nerves, Biochemistry, X-rays

Contents:
Studies on the activation of fibrinolysis, by H. Kowarzyk and others
Fibrin formation in the thromboelastographic curve, by J. Bielski and S. Szymik
The influence of metal ions on the oxidase activity of ceruloplasmin and blood serum, by I. Wald and others

The role of complement and natural antibodies in the process of phagocytosis, by S. Slopek and others
Phagocytic activity of white blood cells from human beings and from different species of animals, by E. Lapinska-Michalska
New antigenic types of Klebsiella bacilli, by J. Maresz-Babczyszyn
Studies on amino acid decarboxylases and the influence of potassium cyanide on the growth of Klebsiella bacilli, by I. Durlakowa and others
The fungistatic action of some chemical compounds on Candida albicans, by J. Alkiewicz and others
The effect of combining streptomycin with nitrofurazone on the development of resistance of Staphylococcus aureus in vitro, by J. Bielawski
The action of diphtheria toxin on cultures of embryonic guinea pig cells, by D. Rogala
A new method of applying solutions in paper chromatography, by L. Popadiuk
Combined autoallo- or homoalloplastic vascular prostheses (preliminary rept.) by H. Kus and E. Szewczak
The influence of drugs with various permeability through vasculo-cerebral barrier on the microphonic potential of the organ of corti, by J. Gieldanowski
Pharmacological properties of benzylpyridylcarbinol derivatives, by M. Wilimowski
The role of hydrolytic processes and transglucosylation in the breakdown and synthesis of glycogen in muscles, by S. E. Karpiak
Morphological and histochemical changes in the cerebral nerve cells of rabbits produced by irradiation with small doses of X-rays, I-III, by J. Tarmas

COMMUNIST CHINA'S SCIENCE AND TECHNOLOGY [SELECTED] TRANSLATIONS NO. 25. 16 Apr 63 [54]p. JPRS: 18736.
Order from OTS $1.50 63-21592

Trans. of titles of, and in most cases, excerpts from, articles in Chung Hua Wai K'o Tsa Chih (Chinese People's Republic) 1962 [v. 10] no. 10, p. 612-641, 644-650, 657-674 and no. 11, p. 634, 681-684, 687-706, 711-731, 733-738, and inside back cover.

DESCRIPTORS: *Abstracts, *Surgery, Plastic surgery, Medicine, Anesthesia, *China.

MEDICAL INDUSTRY USSR, 1963, VOL. 17, NO. 1: [SELECTED] TRANSLATIONS. 8 Mar 63 [17]p. 15 refs. JPRS: 18042.
Order from OTS $0.50 63-21288

Trans. from Meditsinskaya Promyshlennost' SSSR, 1963, v. 17, no. 1.

DESCRIPTORS: Synthesis, *Antineoplastic agents, *Pyrazines, Ethyl radicals, Diuretics, Drugs, *Pentothiazine, Prosthetics, Larynx, Vibrators, *Speech, Mechanical organs, *Chlorothiazine diuretics.

Contents:
The synthesis of dispirotripiperazinium derivatives possessing carcinolytic activity, by V. A. Mikhalev and others
Synthesis of a new diuretic - Nakva, by M. N. Shchukina and others
Artificial vocal apparatuses, by G. A. Bornovolokova.

MEDICAL JOURNAL, 1962, VOL. 84, NO. 1. 1963, 67p. 225 refs. PL-480 HEW.
Order from OTS $0.75 62-11763/1

Trans. of Lijecnicki Vjesnik (Yugoslavia) 1962, v. 84, no. 1, p. 1-66.

DESCRIPTORS: *Medicine, Education, History, *Eye, *Anemia, Medical examination, *Taste, Sensitivity, *Chemoreceptors, *Serotonin, Birth, Pregnancy, *Gynecology, *Q fever, Pathology, *Artificial respiration, Bone, *Plastics, *Epoxy resins, *Isocyanate plastics, Surgery, Yugoslavia

Contents:
The study and teaching of the history of medicine in Yugoslavia, by M. D. Grmek
Fundus of the eye in anemia, by A. Veselenovic and M. Premuzic
Examination of taste sensitivity to bitterness (P. T. C. test) by P. Grünwald and S. Pfeifer
The use of serotonin in obstetrics and gynecology, by E. Rosenzweig and M. Bacic
Q-fever with special reference to pathological changes in the lungs, by Z. Kosutic and D. Boric
Artificial respiration, by A. Longhino
Direct transpiration: the accepted method of artificial respiration, by T. Beritic and A. Markicevic
The binding of bones by industrial synthetic resins, by V. Luetic

PATHOLOGIC PHYSIOLOGY AND EXPERIMENTAL THERAPY, 1963 [VOL. 7] NO. 1: [SELECTED] TRANSLATIONS. 16 May 63, 32p. 22 refs. JPRS: 19220. JPRS: 19220.
Order from OTS $1.00 63-21831

Trans. of Patologicheskaya Fiziologiya i Eksperimental-'naya Terapiya (USSR) 1963 [v. 7] no. 1, p. 14-31.

DESCRIPTORS: *Pathology, *Physiology, *Therapy, Brain, Spinal cord, Body fluids, *Radiation effects, Bioelectronics, Immunology, *Skin, *Transplantation, *Burns, *Radiation sickness, Respiratory system, Lungs, Blood, Acid-base equilibrium, Hypoxia, Plastic surgery.

Contents:
The role of humoral factors in changes of the CNS function in experimental radiation affections, by P. D. Gorizontov and E. N. Shcherbova
Immunotherapy and dermatoplasty in combined burns, by M. A. Tsukerman and others
Experimental therapy of thermal burns of the upper respiratory tract and lungs, by P. Ya. Lokot' and others
The acid-alkaline balance in blood loss combined with a burn, by N. V. Lunina.

TREATISES OF THE SECTION OF MEDICAL SCIENCES, 1956, VOL. 1, P. 1-103, tr. by Zofia Johannsen. 1962, 1v. 316 refs. PL-480 HEW.
Order from OTS $1.25 61-11335/1

Trans. of [Polska Akademia Nauk. Wydzial] Nauk Medycznych. Rozprawy, 1956, v. 1, p. 1-120.

DESCRIPTORS: *Medicine, *Poland, Pathology, Kidneys, *Nephritis, *Regeneration, Nerves, Surgery, *Cholesterol, Blood plasma, Erythrocytes, *Hypothyroidism.

Contents:
Function of the kidneys in diffuse glomerulonephritis, by T. Orlowski
Comparative experimental studies on regeneration of the peripheral nerves after primary and secondary nerve sutures, by P. Petropoulus and S. Stefanko
Cholesterol and its fractions in the plasma and erythrocytes of healthy persons and in hyper- and hypothyroidism, by B. Wisniewski.

TREATISES OF THE SECTION OF MEDICAL SCIENCES, 1958, VOL. 1, P. 1-[57]. 1962, 1v. 42 refs PL-480 HEW.
Order from OTS $0.50 61-11335/3

Trans. of [Polska Akademia Nauk]. Wydzial Nauk Medycznych. Rozprawy, 1958 [v. 3, no. 1] p. 1-84.

DESCRIPTORS: *Medicine, Pathology, *Poland, Sodium compounds, Thiosulfates, *Kidney function tests, *Antigens and antibodies, *Cornea.

Contents:
Functional kidney examinations by means of the sodium thiosulfate clearance degree, by H. Baraban
Investigations on the precipitation of antigens and antibodies in living cornea, by J. Morawiecki.

TREATISES OF THE SECTION OF MEDICAL SCIENCES, 1958, VOL. 2, P. 1-61, tr. by Romuald Semkow. 1962, 1v. 64 refs. PL-480 HEW.
Order from OTS $0.50 61-11335/4

Trans. of [Polska Akademia Nauk]. Wydzial Nauk Medycznych. Rozprawy, 1958 [v. 3, no. 2] p. 1-67.

DESCRIPTORS: *Medicine, Pathology, *Poland, *Pneumonia, Lungs, *Children, Liver, *Liver function tests, *Venereal diseases, Treponema pallidum.

Contents:
Pneumonia in children up to three years of age (pathomorphological assay) by D. Szymanska
Studies on the liver efficiency in syphilitic children, by M. Zawadzka.

TREATISES OF THE SECTION OF MEDICAL SCIENCES, 1958, VOL. 3, P. 1-214. 1963, 1v. 381 refs. PL-480 HEW.
Order from OTS $2.25 61-11335/5

Trans. of [Polska Akademia Nauk]. Wydzial Nauk Medycznych. Rozprawy, 1958, v. 3 [no. 3] p. 1-224.

DESCRIPTORS: *Medicine, Pathology, *Poland, *Typhus fever, Rickettsia, Prisoners of war, Typhus vaccines, *Tuberculosis, Meninges, *Meningitis, Mycobactrium tuberculosis, Histological techniques, *Autoradiography, *Sensory mechanisms, Blood vessels, *Shock (Pathology), Blood transfusions, *Thyroid gland.

Contents:
Typhus fever in the Oswiecim concentration camp in 1941-44, by W. Feikiel
Histopathology of treated tuberculous meningitis, by E. Osetowska-Wieckowska
Investigations on the proper selection of histological technique for autoradiographic purposes, by K. Ostrowski and others
Investigations on the role of vasoreceptors and the central nervous system in pathogenesis of experimental heterogenic post-transfusion shock, by J. Panasewicz
The influence of thyroid on the course of experimental tuberculosis in guinea pig, by S. Starzynski.

TREATISES OF THE SECTION OF MEDICAL SCIENCES, 1960, VOL. 1, P. 1-134, tr. by Maria Radziwillowa. 1963, 1v. 310 refs. PL-480 HEW.
Order from OTS $1.25 61-11335/7

Trans. of [Polska Akademia Nauk]. Wydzial Nauk Medycznych. Rozprawy, 1960 [v. 5, no. 1] p. 1-196.

DESCRIPTORS: *Medicine, Pathology, *Poland, Histamine, *Hypotension, Epinephrine, *Bile, Cardiovascular system, *Autonomic nervous system, Secretion, Stomach, *Tuberculosis, Mycobacterium tuberculosis, *Joints (Physiology).

Contents:
Inhibition of histamine hypotensive effects by adrenalin, by J. Litwin
Investigation of the influence of bile salts on the cardiovascular system, by A. Trzebski
Experimental study on the role of the vegetative nervous system in the regulation of posthistamine gastric juice secretion, by S. Ziemlanski
Experimental tuberculosis of the knee joint in the guinea pig, by W. Barcikowski and Z. Ruszczewski.

TREATISES OF THE SECTION OF MEDICAL SCIENCES, 1960, VOL. 2, p. 1-[176]. 1963, 1v. 343 refs. PL-480 HEW.
Order from OTS $1.75 61-11335/8

Trans. of [Polska Akademia Nauk]. Wydzial Nauk Medycznych. Rozprawy, 1960 [v. 5, no. 2] p. 1-232.

DESCRIPTORS: *Medicine, Pathology, *Poland, *Cancer, Nerve cells, *Neoplasms, Morphology, *Tumors, Cells (Biology), Blood vessels, *Meninges, *Adenine, Purines, *Chlorpromazine, *Reserpine, *Conditioned reflex, Electroencephalography, Electromyography, Necrosis, Liver, *Hormones.

Contents:
Regressive changes in multiform glioma, by M. Ojak
Experimental investigations on the structure of post-traumatic neuromas and on methods of reducing their growth, by S. Stefanko
Effect of euphyline, chloropromazine and reserpine on pia mater vessels in cats and rabbits, by K. Warecka
Structural problems in the formation of conditioned reflexes (EEG and EMG investigations) by J. Majkowski
Development of dietary liver necrosis in rats in relation to sex and sexual hormones, by S. Krus.

Aptekar', S. G.
RELATIONSHIP BETWEEN THE METABOLISM OF RIBOFLAVIN AND THAT OF SULPHUR-CONTAINING AMINO ACIDS AND TRYPTOPHANE (Vzaimootnosheniya Mezhdu Obmenom Riboflavina i Obmenom Serusoderzhashchikh Aminokislot i Triptofana). Apr 63 [4]p. 3 refs. RTS-2243.
Order from OTS or SLA $1.10 63-19139

Trans. of Vopr[osy] Pitaniya (USSR) 1960, v. 19, no. 1, p. 54-55.

DESCRIPTORS: Metabolism, *Vitamin B complex, Sulfur, *Amino acids, *Tryptophan, Nutrition, Diet, Deficiency diseases, Casein, Excretion, *Methionine, *Cystine.

Iwanoff, N. S.
GLANDULAR CYSTIC FIBROMYOMA OF THE UTERUS COMPLICATED BY SARCOMA AND CARCINOMA (Drüsiges Cystenhaltiges Uterusfibromyom Complicirt durch Sarcom und Carcinom). [1962] 7p. (3 figs. omitted).
Order from SLA $1.10 62-14510

Trans. of Monatsschrift für Geburtshülfe und Gynaekologie (Germany) 1898, v. 7, p. 295-300.

DESCRIPTORS: Glands, *Uterus, Tumors, *Cancer, Reproductive system.

Jankowski, W., Kaniowski, T., Reczek, H. L.
X-RAY STUDIES OF HYPO-PHARYNX IN LARYNGECTOMIZED PEOPLE. [1962] 3p. (figs. [refs.] omitted).
Order from SLA $1.10 63-10716

Trans. of Pol[ski] Przegl[ad] Radio[logiczny] (Poland) 1959, v. 23 [no. 1] p. 15-18.

DESCRIPTORS: X-rays, *Throat, *Larynx, Physiology, Morphology, Surgery.

Khetsuryani, G. I.
THE ROLE OF THE THYROID HORMONE IN THE HEALING OF BURNS. 11 Apr 63 [10]p. 13 refs. JPRS: 21562
Order from OTS $0.50 63-21562

Trans. of Akademiya Nauk Gruzinskoi SSR, Tiflis. Soobshcheniya, 1962, v. 29, no. 6, p. 765-772.

DESCRIPTORS: Hormones, *Thyroid hormones, *Thyroxine, Healing, *Burns, *Regeneration, Therapy, Histology, Excision, Thyroid gland, Methyl radicals, Thiouracils.

Mazurenko, N. P.
THE ROLE OF VIRUSES IN THE ETIOLOGY OF LEUCOSES: CONCLUSION. 3 Apr 63 [6]p. JPRS: 18512.
Order from OTS $0.50 63-21487

Trans. of mono. Rol' Virusov v Etiologii Leikozov, Kiev, 1962, p. 191-195.

DESCRIPTORS: *Viruses, Etiology, *Blood disorders, *Chickens, *Mice, *Leukocytes, Leukemia, Diseases.

Negovskii, V. A.
TREATMENT OF TERMINAL STATES IN A THERAPEUTIC CLINIC. 29 Mar 63 [33]p. 80 refs. JPRS: 18444.
Order from OTS $1.00 63-21458

Trans. of Klinicheskaya Meditsina (USSR) 1963, [v. 41] no. 2, p. 3-13.

DESCRIPTORS: Therapy, *Artificial respiration, Arteries, *Parenteral infusions, *Heart, Medicine.

An examination of the question of by what techniques and under what circumstances resuscitation is possible in an internal medicine clinic. The following techniques are considered: artificial respiration; arterial infusion, and indirect heart massage.

Popivanov, R. and Vulchanov, V. Kh.
THE DYNAMICS OF EXPERIMENTAL IMMUNO-SPERMO-PHAGOCYTOSIS. [1963] [6]p. (figs. omitted) 4 refs. FASEB manuscript no. S 231-2.
Order from OTS or SLA $1.10 63-19386

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1962 [v. 33] no. 2, p. 68-70.

DESCRIPTORS: Dynamics, Immunology, *Reproductive system, *Reticuloendothelial system, Leukocytes, *Antibodies, Complement, Coagulation.

It was established that the serum of rabbits immunized with human spermatozoa contained not only complement-fixing antibodies and hetero- and iso-sperm-agglutinins, but also spermoopsonins, responsible for phagocytosis of the human spermatozoa by the rabbit leukocytes. In all the cases of spermophagocytosis observed, the leukocytes seized the spermatozoon by its tail by means of their protoplasmic pseudopodia. (Author)

Saltan, I. I., Shilovtsev, S. P. and others.
RURAL SURGICAL SERVICE [AND] THE PROPHYLACTIC AND THERAPEUTIC EFFECT OF THE SALTS OF MAGNESIUM, CALCIUM, AND BROMIDE IN MALIGNANT TUMORS. 25 Apr 63, 23p. JPRS: 18912.
Order from OTS $0.75 63-21683

Trans. of Vestnik Khirurgii (USSR) 1962 [v. 89] no. 12, p. 3-7, 14-22.

DESCRIPTORS: *Surgery, Rural areas, Hospitals, Chemotherapeutic agents, Salts, *Magnesium compounds, *Calcium compounds, *Bromides, *Neoplasms, *Cancer, Stomach, Diseases, Therapy, Diagnosis, Anesthesia, Laboratory animals.

Senenko, A. N.
DETERMINATION OF THE OSMOTIC RESISTANCE OF THE LEUKOCYTES. [1963] [12]p. 11 refs. FASEB manuscript no. S 208-2.
Order from OTS or SLA $1.60 63-19382

Trans. of Laboratornoe Dalo (USSR) 1962 [v. 8] no. 7, p. 9-14.

DESCRIPTORS: *Osmotic pressure, *Leukocytes, Blood, Cells (Biology), Determination, Diseases, Spleen, Physical properties, Biochemistry, Solutions, Permeability.

Determination of the osmotic resistance of the leukocytes is an additional method of investigation giving evidence of changes in their physico-chemical properties. When the osmotic resistance of the leukocytes to a 0.2% solution of sodium chloride was determined in healthy subjects, the average percentages of polymorphs remaining intact after 30, 60, 120, and 180 minutes were 94, 82, 43, and 26%, and of mononuclears 86, 68, 42, and 25%. In septicemia, pneumonia of streptococcal etiology, and pernicious anemia the osmotic resistance of the polymorphs was lowered, to become normalized during a subsequent clinical remission. An increase in the osmotic resistance of the polymorphs was observed in the influenzal pneumonias and in individual cases of malignant neoplasms. Considerable individual variations were observed in the pattern of leukocytolysis in healthy persons. With marked shifts of the leukocyte formula to the left, rapid swelling and rounding of the nucleus of the stab cells and juvenile neutrophils were observed in a hypotonic solution, which could lead to the mistaken identification of these cells as mononuclears (Author)

Shul'ts, N. A.
THE INFLUENCE OF COSMIC FACTORS ON THE BLOOD SYSTEM. 30 Apr 63, 13p. 31 refs. JPRS: 18960.
Order from OTS $0.50 63-21709

Trans. of Problemy Gematologii i Perelivaniya Krovi (USSR) 1963, v. 8, no. 3, p. 20-26.

DESCRIPTORS: *Cosmic rays, Physiology, Blood, Solar radiation, *Blood disorders.

Data is presented to demonstrate a positive correlation of solar activity and the incidence of leukopenia, leukocytosis, and lymphocytosis.

Sokolov, Yu. N.
METHODOLOGY AND TECHNIQUE OF X-RAY DIAGNOSIS OF CANCER OF THE STOMACH. [1963] [25]p. 29 refs. FASEB manuscript no. S 177-2.
Order from OTS or SLA $2.60 63-19377

Trans. of Vestnik Rentgenologii i Radiologii (USSR) 1962, v. 37, no. 3, p. 3-13.

DESCRIPTORS: X-rays, *Diagnosis, *Cancer, *Stomach, X-ray photography, Medical personnel, Membranes (Biology), Mucus, Classification, Neoplasms, Morphology, Fluoroscopes.

Studenikin, M. Ya. and Skornyakova, L. K.
CURRENT PROBLEMS IN PEDIATRICS. 16 May 63, 7p. JPRS: 19217.
Order from OTS $0.50 63-21828

Trans. of Pediatriya (USSR) 1963 [v. 42] no. 1, p. 3-7.

DESCRIPTORS: *Children, *Medicine, Public health, *Diseases, Infants, *Pregnancy, Communicable diseases, *Infections, Therapy, Viruses, Nutrition, Medical examination, Hospitals, Medical personnel, *Pediatrics.

Tret'yakova, E. N. and others.
PREVALENCE OF RHEUMATIC FEVER AMONG SCHOOL CHILDREN IN UFA. 9 Apr 63 [8]p. 15 refs. JPRS: 18607.
Order from OTS $0.50 63-21536

Trans. of Voprosy Revmatizma (USSR) 1963, v. 3, no. 1, p. 66-70.

DESCRIPTORS: *Rheumatic diseases, *Children, Tonsillitis, Diseases, Streptococcus, Inflammation, *Infections, Respiratory system.

There is a 4% incidence of rheumatism among the school children of the Kirovskiy rayon of Ufa. It is highest in the 11-15 year age group. The most frequent precursors of rheumatism are angina, chronic tonsillitis, and scarlet fever. As a rule, the precursors of rheumatic recidivism are angina, an acute attack of chronic tonsillitis, grippe, and catarrh of the upper respiratory passages. The majority of rheumatic patients had a chronic focus of infection: 79.4% had chronic tonsillitis; 67.3% -- dental caries. In 52% of children in a latent rheumatic phase, there was evidence of moderately expressed clinical signs of the rheumatic process, intensified after an acute phase of chronic tonsillitis, grippe, and catarrh of the upper respiratory passages. (Author)

Vogralik, V. G.
FROM THE HISTORY OF CHINESE FOLK MEDICINE (Iz Istorii Kitaiskoi Narodnoi Meditsiny). 21 Feb 63, 5p.
Order from OTS or SLA $1.10 63-19042

Trans. of Sovetsk[oe] Zdravookhr[anenie] (USSR) 1958 [v. 17] no. 4 [p. 8-12].

DESCRIPTORS: *Chinese traditional medicine, History.

Weigelin, Erich and Lobstein, A.
OPHTHALMODYNAMOMETRY, tr. by R. K. Daily. 1963, 134p.
Order from Hafner Publishing Co., 31 E. 10th St., New York 3, N. Y. $7.95

Trans. of unidentified mono., n.p., n.d.

DESCRIPTORS: *Opthalmology, *Cardiovascular system, Diseases, Diagnosis.

Zhdanov, V. M., Ritova, V. V. and others.
A COMPARATIVE STUDY OF THE INTRANASAL AND AEROSOL METHODS OF VACCINATION AGAINST INFLUENZA (Sravnitel'noe Izuchenie Intranazal'nogo i Aerozol'nogo Metodov Vaktsinatsii Protiv Grippa). [1962] 12p. 1 ref. Trans. V-1812.
Order from OTS or SLA $1.60 63-15464

Trans. of #Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii (USSR) 1962, v. 33, no. 11, p. 63-67.

DESCRIPTORS: *Inhalation immunization, Nose (Anatomy), *Influenza vaccines, Effectiveness, Adaptation (Physiology), Immunity, Vaccines.

Reactiveness of influenza vaccines in the aerosol method of immunization was lower than in the intranasal. Whereupon no temperature reactions above 37.5° were recorded. Other symptoms of the vaccinal reaction (rhinitis, headache, sneezing and so on) were not as often observed and were not as strongly expressed. The best indicators of the acclimatization and of the immunological effectiveness were provided by the egg-tissue and egg-tissue combined vaccine of the type A_2. The comparative data attest to the prospectiveness and convenience of the aerosol method for the immunization of wide masses of the population by the live influenza vaccine; nevertheless, further research is needed for its final evaluation. (Author)

Pharmacology and Toxicology

A NEW DIURETIC: CYCLOPENTHIAZIDE (Un Nuovo Diuretico: la Ciclopentiazide). [1962] 2p. 3 refs.
Order from SLA $1.10 63-10568

Trans. of Boll[etino] Chim[ico]-Farm[aceutico] (Italy) 1961, v. 100, p. 200-201.

DESCRIPTORS: Drugs, *Diuretics, Sulfonamides, Toxicity, Excretion, *Chlorothiazide diuretics, Tolerances (Physiology), Sympatholytic agents, Vasoactive agents.

Agostino, S. d' and Maddaluno, R.
THE IN VITRO REDUCING ACTION OF SOME ANTIBIOTICS AND CHEMOTHERAPEUTIC AGENTS (Attività Riducente In Vitro di Alcuni Antibiotici e Chemioterapici). [1962] [13]p. 32 refs.
Order from SLA $1.60 63-10501

Trans. of Aggiornamento Pediatrico (Italy) 1961, v. 12 [no. 10] p. 477-484.

DESCRIPTORS: Reduction, *Antibiotics, *Chemotherapeutic agents, Excretion, Urine, Urinalysis, Drugs, Pharmacology, Absorption (Biological).

Besson, S.
THE COMBINATION OF GAMMA GLOBULINS + HISTAMINE IN THE TREATMENT OF ALLERGIES. [1962] 5p. 12 refs.
Order from SLA $1.10 63-10531

Trans. of Assoc[iation des] Diplômés [de] Microbiol[ogie de la] Fac[ulté de] Pharm[acie de] Nancy. Bull[etin] (France) 1960, no. 80, p. 16-19.

DESCRIPTORS: *Gamma globulins, *Histamine, Therapy, *Allergy, Diagnostic agents, *Antigen-antibody reactions, Serum, Immune serums, Drugs, Biological products

Beumer, H. M.
THE TREATMENT OF BRONCHIAL ASTHMA WITH A NEW COMBINATION DRUG (ISOPROPHENAMINE, ETHOXYBUTAMOXANE AND THENYLPYRAMINE). [1962] 4p.
Order from SLA $1.10 63-10753

Trans. of Nederl[ands] Tijdschr[ift voor] Geneesk[unde] 1962, v. 106, no. 16, p. 823-825.

DESCRIPTORS: Therapy, Drugs, *Allergy, Lungs, *Antihistamines, Sympathominetic agents, *Amphetamines, Pyridines, Hypnotics and sedatives.

An improvement has been noticed in all patients after an oral application of 10 ml. mixture of these 3 drugs. This improvement was constant (measured by ventilatory reserves) even after several hours. These observations are in accordance with the literature data. It was noticed also that in no one case (average 100/min.) the tachycardia was observed. No one patient has had the nervousness of tremors. In the case of two patients who had a status asthmaticus at the admission time into the Central Military Hospital, Utrecht, an effective improvement was achieved after an oral doses of 10 ml. After 3 and 6 hours the same doses was repeated. (Author)

Brandl, E. and Margreiter, H.
AN ACID STABLE BIOSYNTHETIC PENICILLIN (Ein Säurestabiles Biosynthetisches Penicillin). [1962] [19]p. (refs. omitted) 12 refs.
Order from SLA $1.60 63-10289

Trans. of Osterreichische Chemiker-Zeitung (Austria) 1954, v. 55, no. 1/2, p. 11-21.

DESCRIPTORS: *Penicillins, *Antibiotics, *Biosynthesis, Hydrogen ion concentration, Yeasts, Phenoxy radicals, Methyl radicals, Fermentation, Acetic acid, Chemistry, Precipitation, Chemical properties, Physical properties, Stability, Salts.

The biosynthesis of penicillins and the influence of the side chain, as well as biological activity and the physico-chemical properties are discussed. The description of the preparation of acid-resistant phenoxymethyl penicillin (by authors named as "V"), and different sources and precursors are given. Two methods are given for the removal of accompanying phenoxyacetic acid in the process of extraction, which makes difficult the purification of the final product. Working on the experiments for the preparation of a new addition compound of penicillin V with diisopropyl ether, the stability of free penicillinic acid was detected, offering some new methods unknown up to then in the penicillin chemistry. The precipitation of free phenoxymethyl penicillinic acid from an aqueous penicillin salt solution with HCl, is described, and as further possibility for its isolation- a method of the solvent evaporation is proposed. General properties of phenoxymethyl penicillin, like crystallorgraphic data, biological activity, stability, solubility, dissociation constant, optical activity have been described, as well as the preparation possibilities and characteristic properties of different penicillin V salts- are also given. (Author)

Brandl, E., Giovannini, M., and Margreiter, H.
THE INVESTIGATION OF AN ACID-RESISTANT, ORAL PHENOXYMETHYL PENICILLIN (PENICILLIN V). [1962] [17]p. (refs. omitted).
Order from SLA $1.60 63-10287

Trans. of Wien[er] Medizinische Wochenschrift (Austria) 1953, v. 103, no. 33/34, p. 602-607.

DESCRIPTORS: *Penicillins, Chemical properties, Physical properties, *Antibiotics, Mouth, Therapy, Toxicity, Hydrogen ion concentration, Phenoxy radicals, Methyl radicals.

Cattaneo, L., Giraldi, A., and Mainieri, L.
COMBINATION OF CYCLOPENTHIAZIDE, NEW SULFONAMIDE DIURETIC, WITH GUANETHIDINE IN TREATING HYPERTENSION (L'Associazione della Ciclopentiazide, Nuovo Diuretico Sulfamidico, con la Guanetidina nel Trattamento dell'Ipertensione Arteriosa). Jan 63, 10p. 29 refs.
Order from SLA $1.10 63-10723

Trans. of Cl[inica] Terap[eutica] (Italy) 1961, v. 21, Dec, p. 636-644.

DESCRIPTORS: *Duiretics, *Thiazide diuretics, *Sulfonamides, *Guanethidine, *Hypertension, Blood pressure, Toxic tolerances.

The authors studied the behavior of the blood pressure in 20 patients with various types of hypertension and treated with the combination of cyclopenthiazide, a new sulfonamide diuretic, with guanethidine. The preparation proved to be definitely active in all the cases and to have prolonged action. The phenomenon of the fall of pressure in orthostatic position is frequent, although slight with the usual therapeutic doses, marked in the severe cases given large doses. In addition, the authors found a moderate diuretic effect and absolute absence of toxic side effects or intolerance to the drug. (Author)

Chernukh, A. M. and Kivman, G.Ya.
ANTIBIOTICS OF THE TETRACYCLINE GROUP: SELECTED PARTS. 30 Apr 63, 38p. JPRS: 18970.
Order from OTS $1.00 63-21714

Trans. of mono. Antibiotiki Gruppy Tetratsiklinov, Moscow, 1962, p. 6-18, 296-316, 356.

DESCRIPTORS: Antibiotics, *Tetracyclines, *Growth substances, Metabolism, Stimulation, Embryos, Chickens, Body weight, *Chlortetracycline, *Oxytetracycline.

Contents:
Table of contents
Chap. 1. General information on tetracyclines
Chap. 6. Growth-stimulating effect of tetracyclines on the organism.

Corradini, S. Ginanni, Barcaroli, F., and Casini, E.
BLOOD AND CEREBROSPINAL FLUID LEVELS OF DEMETHYLCHLORTETRACYCLINE FOLLOWING ORAL ADMINISTRATION (Livelli Ematici e Liquorali di Demetilclortetraciclina dopo Somministrazione per Via Orale). [1962] [16]p. 12 refs.
Order from SLA $1.60 63-10503

Trans. of Aggiornamenti sulle Malattie da Infezione (Italy) 1961, v. 7 [no. 4] p. 213-220.

DESCRIPTORS: *Blood, *Cerebrospinal fluid, Absorption (Biological), *Ledermycin, *Tetracyclines, *Antibiotics, Therapy, *Streptomycins, Toxicity, Meningitis.

Corradini, S. Ginanni, Barcaroli, F., and Casini, E.
THE USE OF DEMETHYLCHLORTETRACYCLINE IN SOME INFECTIOUS DISEASES (L'Uso della Demetilclortetraciclina in Alcune Malattie da Infezione). [1962] 15p. 12 refs.
Order from SLA $1.60 63-10502

Trans. of Aggiornamenti sulle Malattie da Infezione (Italy) 1961, v. 7 [no. 3] p. 141-148.

DESCRIPTORS: *Ledermycin, *Antibiotics, Therapy, Communicable diseases, Excretion, Absorption (Biological), *Streptomycins, Toxicity, Tolerances (Physiology), *Tetracyclines.

Cottier, P.
THE SALURETICS IN THE THERAPY OF HYPERTENSION (Die Saluretika in der Behandlung der Hypertonie). [1962] [16]p. 29 refs.
Order from SLA $1.60 63-10540

Trans. of Wien[er] Med[izinische] W[ochenschrift] (Austria) 1961, v. 111, 14 Oct, p. 659-664.

DESCRIPTORS: *Diuretics, Therapy, *Hypertension, Kidneys, Blood plasma, Volume, Hypotension, Potassium, Diseases, *Thiazide diuretics.

The saluretics now commonly used in treating hypertension and their renal and extrarenal effects are mentioned first. The present idea about their hypotensive effect assumes in the initial phase of therapy the collaboration of reduction of the heart minute volume (because of reduction of the plasma volume) and an inadequate response of the peripheral vascular resistance as the cause of the fall of blood pressure. In a later phase of therapy the heart minute volume becomes normal and peripheral resistance decreases further for reasons not known so far, so that the hypotension persists. Numerous renal and extrarenal factors can impair the effect of the saluretics on the salidiuresis. At the end, practical principles for the use of saluretics in treating hypertension are discussed. The only dangerous side effect is hypokaliemia. Occasionally hypokaliemia can also occur with cyclopenthiazide which in acute pharmacological experiments shows a distinctly lower kaliuretic effect than the other saluretics. Therefore we continue to advise prophylactic potassium substitution. (Author)

Dettli, L.
DETERMINATION OF DOSE-EFFECT CURVES BY MEANS OF SEQUENTIAL ANALYSIS (Bestimmung von Dosiswirkungskurven Mittels Sequenzanalyse). [1962] 3p. 1 ref.
Order from SLA $1.10 63-10538

Trans. of Helvet[ica] Physiol[ogica et] Pharmacol[ogica] Acta (Switzerland) 1962, v. 20, July, p. C18-C20.

DESCRIPTORS: *Chlorothiazide diuretics, Determination, Diuretics, Drugs, *Sequential analysis, Drugs, Dosage, Sodium, Excretion, Sulfonamides

The increase in renal sodium excretion (γ) produced by Quinethazone (QEZ) was compared with that by hydrochlorothiazide (HCT) in 34 edema-free patients. The dose-effect curve of the comparison diuretic, HCT, was calculated by means of correlation statistics. It is known that the maximum effect of this diuretic is reached with 100 mg. The dose-effect curve of QEZ was determined by means of two sequential-analytic series of comparison: (1) By comparing the effects of various doses of QEZ, the linear range of the dose-effect curve, as well as the maximally active dose of QEZ, was ascertained. (2) By comparing the effects of various QEZ doses with various HCT doses, the position of the dose-effect curve in relation to that of HCT was determined. Results are presented.

Dettli, L., Spring, P., and Baur, M.
COMPARATIVE INVESTIGATION OF A DIURETIC (CYCLOPENTHIAZIDE) IN HEALTHY AND EDEMATOUS MEN (Vergleichende Prüfung eines Diureticums (Cyclopenthiazid) am Gesunden und am Ödemkranken Menschen). [1962] 17p. 24 refs.
Order from SLA $1.60 63-10187

Trans. of Arzneimittel-Forschung (West Germany) 1962, v. 12 [no. 3] p. 289-294.

DESCRIPTORS: *Chlorothiazide diuretics, Drugs, *Diuretics, Edema, Man, Heart, Diseases, Toxicity, Dosage, Sulfonamides, Tolerances (Physiology), Vaso-active agents, Sympatholytic agents.

The authors have investigated the problem whether the results obtained by quantitative and qualitative assay of a diuretic drug in healthy individuals are relevant for the evaluation of clinical conditions. For this purpose, a new sulfonamide saluretic drug, 6-chloro-3-cyclopenthenyl-methyl-3, 4-dihydro-7-sulfamyl-2H-benzothiazine-1, 1-dioxide (Cyclopenthiazid) [CPT], Navidrex^{R} has been tested in a series of patients suffering from chronic cardiac edema. The experimental conditions were the same as recently observed in a test of this drug in healthy individuals. No statistically significant difference was found between the results obtained in both series of experiments. This indicates that the values obtained in healthy individuals may be held just as representative as the results observed in edematous patients. Investigations performed in health individuals offer certain advantages. Studies concerning habituation, toxicity and ceiling doses, however, are more practicable in edematous patients. (Author)

Doskocilova, D. and Vondracek, M.
MICROMETHODS FOR THE IDENTIFICATION AND CHARACTERIZATION OF ACTINOMYCETES ANTIBIOTICS: IDENTIFICATION OF ANTIBIOTICS ON THE BASIS OF INFRARED SPECTRA. [1963] 16p.
Order from ATS $17.50 ATS-21Q68R

Trans. of #Antibiotiki (USSR) 1961, v. 6, no. 8, p. 738-751.

DESCRIPTORS: Microscopy, Identification, *Actinomycetes, *Antibiotics, *Infrared spectroscopy.

Drizgalovich-Egorova, S. E.
THE STATE OF NEWBORN RABBITS IN ALLOXAN INDUCED DIABETES AT VARIOUS PERIODS OF RABBIT PREGNANCY (Sostoyanie Novorozhdennykh Krolikov pri Alloksanokom Diabete, Vyzyvaemom v Raznye Sroki Beremennosti Krol'chikhi). 19 Feb 63, 9p. (figs. refs. omitted).
Order from OTS or SLA $1.10 63-19046

Trans. of Probl[emy] Endokr[inologii i] Gormonoter-[apii] (USSR) 1960 [v. 6] no. 5, p. 20-23.

DESCRIPTORS: *Rabbits, *Alloxan, *Diabetes, *Pregnancy, Reaction (Physiology), Anoxia, Birth, Embryos, Metabolism, Pathology.

The purpose of the present investigation was the study of the state of newborn rabbits of rabbit mothers with alloxan diabetes, induced during the period of implantation, during the period placentation and at the end of the term. Reaction to asphyzia was studied on the newborn immediately after birth.

Franken, F. H., Irmscher, K., and Schweinitz, H. A. v.
STUDIES WITH SU 4885 (METOPIRONE) IN PATIENTS WITH ASCITES AND EDEMA RESISTANT TO THERPY (Studien mit SU 4885 (Metopiron) bei Patienten mit Therapierefraktarem Ascites und Oedemen). [1962] 14p. 45 refs.
Order from SLA $1.60 63-10188

Trans. of Klin[ische] W[ochenschrift] (West Germany) 1962, v. 40 [no. 3] p. 137-143.

DESCRIPTORS: *Dexamethasone, Drugs, Diuretics, *Edema, Therapy, Diseases, Heart, Liver, Excretion, Urine, Corticosteroid agents, *Chlorothiazide diuretics, *Prednisone, Aldosterone, Mercury compounds.

Three patients with therapy-resistant ascites in liver cirrhosis and 2 with therapy-resistant edema in insufficiency of the right heart were treated with SU 4885 (Metopirone), a blocker of 11-β-hydroxylation in the adrenal cortex, plus dexamethasone or prednisone and saliuretics. Whereas no diuretic effect was obtained with SU 4885 and dexamethasone doses alone, each time natriuresis and water diuresis began after addition of a saliuretic with reduction of weight and complete or partial excretion of the ascites. In the two patients with therapy-resistant cardiac edema no influence of the combination therapy was observed. The increased aldosterone excretion in the urine fell to levels sometimes no longer measurable after administration of SU 4885, as did the cortisol and cortisone excretion. With the latter though the inhibiting effect of dexamethasone must also be considered. The different significance of the mineralocorticoids in the different kinds of edema is discussed as an explanation for the varying response of hepatogenic ascites and cardiac edema to combined Metopirone-dexamethasone-Esidrix therapy.

Galskov, A.
A COMPARISON OF HYDROCHLOROTHIAZIDE PREPARATIONS OF VARYING POTASSIUM CONTENT. [1963] 6p.
Order from ATS $8.50 ATS-53Q67D

Trans. of Nord[isk] Med[icin] (Sweden) 1962, v. 67, no. 9, p. 280-283.

DESCRIPTORS: *Diuretics, *Potassium, Drugs, *Chlorothiazide diuretics

Gebhard, J., Heller, K. and others.
INVESTIGATIONS OF THE BIOLOGICAL ACTIVITY OF 4,5-DIHYDROPREDNISONE (N) (Untersuchungen zur Biologischen Wirkung des 4,5-Dihydroprednison (N)). [1962] 11p. (refs. omitted).
Order from SLA $1.60 63-10357

Trans. of Acta Endocrinologica (Denmark) 1959, v. 31 [no. 3] p. 341-348.

DESCRIPTORS: *Biological assay, *Prednisone, Prednisolone, *Corticosteroid agents, Excretion, Urine, Drugs, Pharmacology, Liver, Thymus gland, Metabolism, Minerals.

Giovannini, M.
COMPARATIVE INVESTIGATION OF PENICILLIN G AND PENICILLIN V AFTER PERORAL APPLICATION (Vergleichende Untersuchungen von Penicillin G und Penicillin V nach Oraler Verabreichung). [1962] [5]p. (foreign text included) 7 refs.
Order from SLA $1.10 63-10288

Trans. of Wiener Medizinische Wochenschrift (Austria) 1954, v. 104, no. 46, p. 910-911.

DESCRIPTORS: *Antibiotics, *Penicillins, Mouth, Therapy, Stability, Hydrogen ion concentration, Phenoxy radicals, Methyl radicals, Absorption, Digestive system, Decomposition.

Because of acid instability penicillin G is not appropriate for oral application. It can be found in the blood only if stomach is avoided, i.e. after a parenteral or duodenal application. Penicillin V (phenoxymethyl penicillin is suitable for oral application because of its acid resistance. It passes the stomach without the decomposition. In animal experiments it was possible to show that maximal resorption of penicillins occurs in the duodenum. The resorption conditions for penicillin V and penicillin G look very similar. Both are fast resorbed. Both penicillins are resorbed at a lower rate in the deeper parts of the intestine. Because the obtained blood pictures are usually lower, and don't? last longer, it is supposed that one part of penicillin is decomposed. (Author)

Gross, Rudolf.
COMPARISON OF THE ACTIVITIES OF HYDROCORTISONE AND ESTERS OF PREDNISONE AND PREDNISOLONE FOR INTRAVENOUS USE (Vergleich Zwischen Hydrocortison und Verschiedenen Intravenös Anwendbaren Estern des Prednisons und Prednisolons). [1962] 8p. (figs. omitted) 4 refs.
Order from SLA $1.10 63-10385

Trans. of Klin[ische] W[ochen]schr[ift] (West Germany) 1958, v. 36, no. 10, p. 460-462.

DESCRIPTORS: Esters, *Corticosteroid agents, Drugs, Intravenous injections, Eosinophils, Blood counts, Metabolism, Hormones, *Prednisolone, *Prednisone.

With the use of a standardized technique (intravenous infusion of 40 mg in 500 cc saline solution for 2 hours), the effects of free hydrocortisone, hydrocortisone-21-piperidinoacetate, 21-carbomethoxyasparaginates of prednisone and prednisolone, the hemisuccinates of prednisone and prednisolone, as well as the 21-piperidinoacetate of prednisolone were comparatively tested in groups of seven unselected patients with blood eosinophilia. With regard to the rapidity of the onset of action, the infusion of the free hydrocortisone was not surpassed by any of the prednisones and prednisolones tested. With reference to the total effect over a period of eight hours, hydrocortisone (free) was also comparable with the most effective of the prednisolones. On the other hand, following a single dose, the latter exhibited a more persistent effect for at least ten hours. With an otherwise similar structure, the particular prednisdone esters were significantly more effective than the corresponding prednisone esters. The time-effect differences fit the explanation of delayed metabolic transformation of predniso(lo)nes (prolonged blood level of 11-oxycorticosteroids). (Author)

Guyotjeannin, Ch. and Lay, J. le
PREVENTION OF "BENZOLISM:" TOXICOLOGICAL CONTROL OF BENZENOID HYDROCARBONS IN THE ATMOSPHERE AND SOLVENTS. [1963] 14p.
Order from ATS $14.25 ATS-36Q69F

Trans. of Soc[iété de] Pharm[acie de] Bordeaux. Bull[etin] (France) 1962, v. 101, p. 51-55.

DESCRIPTORS: *Hydrocarbons, *Benzenes, Atmosphere, Solvents, *Toxicity, Control.

Hausmann, E. and Zischinsky, H.
THE EXPERIENCE WITH "OSPEN" A NEW ORAL PENICILLIN FOR CHILDREN. [1962] 5p.
Order from SLA $1.10 63-10286

Trans. of Wien[er] Med[izinische] W[ochenschrift] (Austria) 1953, v. 103, no. 39, p. 725-727.

DESCRIPTORS: *Antibiotics, *Penicillins, Mouth, Children, Therapy, Diseases, Dosage.

In 106 cases, a new peroral penicillin V, Ospen, has been applied 114 times. The product is absolutely comparable to a parenteral penicillin G supposedly applied every 3-4 hours. It is also superior to Depot-penicillin from the economical point of view. The biggest advantage being the injection avoidance. In the cases of medium difficult diseases the next dosages are recommended: up to 15 kg. of body weight: 6 times 15 mg. per day, 15 to 30 kg. of body weight: 6 times 30 mg. per day, and above 30 kg. of body weight: 8 times 30 mg. per day. In severe cases the dosages are proportionally increased. If a diarrhea occurs in the beginning of the therapy, it is recommended penicillin G intramusculary, and then to continue with Ospen. The same recommendation is valuable in some extraordinary severe cases. Up to now observed side effects were of a just minor nature (temporary diarrhea, alergic dermatitis, black hair-tongue). (Author)

Heinen, G., Krahe, M. and others.
EXPERIMENTAL-CLINICAL INVESTIGATIONS ON THE INFLUENCE OF A NEW SULFONAMIDE DIURETIC IN THE PATHOLOGICAL EDEMA OF PREGNANCY (Experimentell-Klinische Untersuchungen über die Beeinflussung des Pathologischen Schwangerschaftsödems mit einem Neuen Sulfonamiudiuretikum). [1962] 13p. 28 refs.
Order from SLA $1.60 63-10567

Trans. of Medizinische Klinik (West Germany) 1961, v. 56, 1 Sep, p. 1497-1501.

DESCRIPTORS: *Chlorothiazide diuretics, Drugs, Sulfonamides, Diuretics, *Edema, *Pregnancy, Toxicity, Tolerances (Physiology).

This is a report on clinical-experimental studies with a new diuretic, cyclopenthiazide, in normal pregnant women and patients with toxemia of pregnancy. (Author)

Ivanitskii, A. M.
SENSITIVITY OF ANIMALS TO DRUGS AFTER EXPOSURE TO Sr^{90}. [1963] [6]p. 6 refs. FASEB manuscript no. S 167-2.
Order from OTS or SLA $1.10 63-19376

Trans. of Meditsinskaya Radiologiya (USSR) 1962, v. 7, no. 7, p. 72-74.

DESCRIPTORS: Sensitivity, Animals, *Drugs, *Strontium, *Radiation effects, Radioactive isotopes, Barbiturates, Anesthetics, *Toxic tolerances, *Radiation sickness, Nervous system, Heart.

In the early stages of Sr^{90} poisoning (1.5 mC/kg), resistance to drugs is largely maintained at the level characteristic of the healthy animal. The largest decrease in the resistance of the affected animals was observed to the anesthetic substance hexobarbital. (Author)

Jacono, A., Vitale, P. and others.
COMPARATIVE EVALUATION OF THE DIURETIC AND SALURETIC ACTION OF HYDROCHLOROTHIAZIDE AND CYCLOPENTHIAZIDE, A NEW COMPOUND OF THE BENZOTHIADIAZINE GROUP (Valutazione Comparative dell'Azione Diuretica e Saluretica della Idroclorotiazide e della Ciclopentiazide, Nuovo Composto dell Gruppo Benzotiodiazinico). 21 Dec 62, 11p.
Order from SLA $1.60 63-10569

Trans. of Riforma Medica (Italy) 1961, v. 75, p. 1392-1396.

DESCRIPTORS: *Diuretics, *Chlorothiazide diuretics, Thiazines, Benzyl radicals, Excretion, Urine, Sodium, Potassium, Edema, Liver, Diseases, Heart, Drugs

The diuretic and saliuretic action of a new compound drug of the benzothiadiazine group, the cyclopenthiazide, on 11 heart-patients (failure cases) and 5 cases of cirrhosis with ascites were estimated. On another group of patients, selected and homogen (5 heart patients and 2 cirrhotic), a compared study between cyclopenthiazide (0.5-1mgm) and hydrochlorothiazide (50-100 mgm) was carried over. Both drugs were alternatively employed in each single case for short periods of 3 to 4 days. The cyclopenthiazide showed a diuretic and natriuretic action comparable to hydrochlorothiazide at a hundred times lesser dosage. Na/K relation appeared to be higher after the use of cyclopenthiazide in almost all heart patients; conversely in cirrhotic patients Na/K relation did not show any change. (Author)

Kolb, K. H., Kimbel, K. H., and Schulze, P. E.
THE INFLUENCE OF VARIOUS ANABOLIC STEROIDS ON THE EXCRETION OF DYES INTO THE BILE OF RATS. [1962] 8p. (figs. tables refs. omitted).
Order from SLA $1.10 63-10513

Trans. of Arzneimittel-Forschung (West Germany) 1962, v. 12, no. 3, p. 228-230.

DESCRIPTORS: Metabolism, *Steroids, Drugs, Excretion, Dyes, *Bile, Rats, *Liver, Iodine, Labeled substances, Chlorides, Sodium compounds, Inhibition, Androstene, Sulfobromophthalein sodium, Methyl radicals, Testosterone.

Using the example of the excretion of I^{131}-labeled rose bengal into the bile of rats, it was shown that all the 17-alkylated anabolically efficacious steroids which were tested more or less inhibited the dye-excretion capacity of the liver when administered orally for 21 days. The same thing applies to androstane-17-beta-ol-3-one, an anabolic not alkylated at the 17th place. 1-methyl-delta^1-androstene-17-beta-ol-3-one was the only one of the 8 compounds tested that had no influence on the excretion of the dye. (Author)

Komendantova, M. V.
THE IMPORTANCE OF THE ION COMPONENT IN THE PHARMACODYNAMICS OF AMINAZINE (Znachenie Ionnogo Komponenta v Farmakodinamike Aminazina) tr. by Wanda M. Feeley. Apr 61, 11p. PSC no. 60-691.
Order from OTS or SLA $1.60 62-24320

Trans. of Farmakologiya i Toksikologiya (USSR) 1960, v. 23, p. 99-105.

DESCRIPTORS: *Chlorpromazine, Drugs, *Ions, *CNS depressants, *Calcium compounds, Blood pressure, Respiration, Brain, Sensitivity, Chlorides, Esters, Electroencephalography.

Calcium salts provide a temporary restoration of the movement functions affected by aminazine. A fall of the blood pressure and depression of respiration, caused by aminazine, are not removed by calcium. A preliminary course of administration of calcium reduces the sensitivity of animals to aminazine. (Author)

Laschet, U. and Hohlweg, W.
TESTING RECENT GLUCOCORTICOID PREPARATIONS. [1962] 6p. (figs. refs. omitted).
Order from SLA $1.10 63-10504

Trans. of [die] Pharmazie (Germany) 1960, v. 15, p. 374-377.

DESCRIPTORS: Tests, *Corticosteroid agents, Drugs, *Prednisone, *Prednisolone, Pharmacology, Biological assay, Inhibition, Secretion, Thymus gland, Adrenal glands, Pituitary gland.

There is described a new and simple testing procedure for glucocorticoids. In the NTP test (the product of the adrenal gland weight and the thymus weight) consideration is given to both the peripheral glucocorticoid effect (thymus involution) and also to the central effect (adrenal atrophy through inhibition of the corticotropic function of the craviopharyngeal anterior lobe). The efficacy of prednisone, prednisolone, 6α-methyl-prednisolone, 9α-fluoro-16α-hydroxy-prednisolone and 9α-fluoro-16α-methyl-prednisolone was investigated by this process. (Author)

Meyer, R. de.
TERATOGENIC ACTION OF SUBSTANCES THAT DISTURB CARBOHYDRATE METABOLISM. [1962] [40]p. (figs. omitted).
Order from SLA $3.60 63-10520

Trans. of mono. Etude Experimentale de la Glycoregulation Gravidique et de l'Action Teratogene des Perturbations du Metabolisme Glucidique (Experimental Study of Glycoregulation in Pregnancy and of the Teratogenic Action of Disturbances in Glucose Metabolism) Paris, 1961, chap. 4, p. 173-190, 231-245.

DESCRIPTORS: *Anomalies, Drugs, Rats, *Pregnancy, Eye, Mouth, Brain, *Hypoglycemia, *Metabolism, *Carbohydrates, Sulfonamides, Embryos, Mitosis, Urinary system, Hemopoietic system, *Antimetabolites.

Protiva, Miroslav and others.
ANTIHISTAMINE SUBSTANCES. XXXI. CONTRIBUTION TO THE MECHANISM OF ACTION OF ANTIHISTAMINES (SIMPLE BENZYLAMINE AND BENZHYDRYL AMINE SALTS). Jan 63, 6p.
Order from SLA $1.10 63-10583

Partial trans. (p. 1621-1623) of Chemicke Listy (Czechoslovakia) 1953, v. 47 [no. 11] p. 1621-1632.

DESCRIPTORS: Drugs, *Antihistamines, *Benzyl radicals, *Amines, Salts, *Diphenylmethanes, Substitution reactions.
Cyclopenthiazide represents a new chlorothiazide diuretic which is very effective in the doses indicated and which because of its particularly favorable action on the potassium balance, can be used safely and securely. (Author)

Pupita, F.
DIURETIC ACTIVITY OF CYCLOPENTHIAZIDE (Sulla Attivita Diuretica della Ciclopentiazide). Nov 62, 8p. 6 refs.
Order from SLA $1.10 63-10186

Trans. of Gazz[etta] Internaz[ionale di] Med[icina e] Chir[urgia] (Italy) 1961, v. 66, p. 2304-2310.

DESCRIPTORS: *Diuretics, Drugs, Therapy, Potassium, Excretion, Urine, *Chlorothiazide diuretics, Vasoactive agents, Sympatolytic agents.

Experiments on the diuretic action of cyclopenthiazide prove clearly that the therapeutic action of the drug is undoubtedly different from that of hydrochlorothiazide in a positive sense. Its activity can be compared with that of the most recent thiazide derivatives; its truly slight influence on potassium excretion seems even to be less than that exerted by these latter preparations.

Röckl, H.
INITIAL EXPERIENCE WITH DEMETHYCHLORTETRACYCLIN (LEDERMYCIN) IN DERMATOLOGY. [1962] 5p. (figs. tables refs. omitted).
Order from SLA $1.10 63-10515

Trans. of Münch[ener] Med[izinsche] W[ochenschrift] (West Germany) 1961, v. 103, 3 Feb, p. 266-268.

DESCRIPTORS: *Antibiotics, *Skin, Steptomycins, Methyl radicals, Chlorides, Diseases, *Tetracyclines, Chemotherapy, Stability.

After an introductory explanation of the pertinent and most important experimental and clinical data of demethylchlortetracyclin, a report is made on the therapeutic experience obtained with a total of 125 in- and out-patients suffering from different skin diseases. In its antimicrobic effect, demethylchlortetracyclin corresponds to other tetracyclins. Intolerance disturbances occurred in some patients only in the form of reversible complaints as to the stomach-intestinal tract. Greater chemical stability and the longer stay of the drug in the body make it possible to reduce the daily dose to 600 mg, at only 12-hour intervals now, which is an advantage of equal importance to both patient and nursing personnel. (Author)

Schindelmaisser, F. and Klasterneuburg, M. D.
THE EXPERIENCE OF A PRACTITIONER WITH "OSPEN" PENICILLIN V: A NEW ACID STABLE ORAL PENICILLIN. [1962] 2p.
Order from SLA $1.10 63-10302

Trans. of Wien[er] Med[izinische] W[ochenschrift] (Austria) 1954, v. 104, no. 18, p. 369.

DESCRIPTORS: *Antibiotics, *Penicillins, Mouth, Therapy, Medical personnel, Hydrogen ion concentration.

"Ospen" is a valuable novelty for the therapy of a practitioner, esp. for terrain-physician. It performs a continuous penicillin therapy which sometimes was not possible up to now because of some circumstances. "Ospen" therapy gives more free time to the physician, and patients themselves are free from the injection fear. The danger of penicillin misuse, because of the oral application, is not too big considering a proper explanation and orientation. It is true that this danger will always exist because of improper dosages, or cutting off the therapy too early. (Author)

Schnider, U.
COMBINATION THERAPY OF HYPERTENSION WITH GUANETHIDINE-CHLOROTHIAZIDE DERIVATIVES (ISMELIN-ESIDRIX AND ISMELIN-NAVIDRIX) (Die Kombinationsbehandlung der Hypertonie mit Guanethidine-Chlorothiazid-Derivaten (Ismelin-Esidrex und Ismelin-Navidrex)). Jan 63, 15p. 17 refs.
Order from SLA $1.60 63-10724

Trans. of Schweiz[erische] Med[izinische] W[ochenschrift] 1962, v. 92, 15 Sep, p. 1127-1132.

DESCRIPTORS: Therapy, *Hypertension, Drugs, Diuretics, Vaso active agents, Sympatholytic agents, *Guanethidine, Tranquilizers, Blood pressure, Corticosteroids, *Chlorothiazide diuretic.

The combination therapy of essential hypertension by means of the elective sympathetic inhibitor guanethidine and the chlorothiazide derivatives, hydrochlorothiazide (Esidrix) and cyclopenthiazide (Navidrix) was studied in detail on 70 cases. By means of 5 cases the problems of treating nephrogenic hypertension is discussed; also the effect of guanethidine on the hypertension secondarily produced by corticosteroid therapy (dexamethasone) is examined (3 cases). (Author)

Schroder, R.
STUDIES ON THE RELATION BETWEEN ANGIOTENSIN INFUSION AND ALDOSTERONE SECRETION (Untersuchungen über die Beziehung Zwischen Angiotensininfusion und Aldosteronsekretion). [1963] 6p. 13 refs.
Order from SLA $1.10 63-10928

Trans. of Klin[ische] W[ochenschrift] (West Germany) 1962 [v. 40] 15 July, p. 752-754.

DESCRIPTORS: *Hypertensin, *Parenteral infusions, Drugs, *Aldosterone, Secretion, Hormones, Adrenocorticotropic hormone, Sodium, Excretion, Potassium.

Serantes, N. A., Mestres, A. O., and Bischoff, N.
EVALUATION OF THE DIURETIC ACTION OF 8341-SU (CYCLOPENTHIAZIDE) IN FIVE DIABETICS (Valoración de la Acción Diuretica del 8341-SU (Ciclopentiacida) en Cinco Diabéticos). [1962] 9p.
Order from SLA $1.10 63-10539

Trans. of el Dia Medico (Argentina) 1961, v. 33, 27 Nov, p. 2829-2835.

DESCRIPTORS: *Chlorothiazide diuretics, Drugs, *Diabetes, *Diuretics, Sulfonamides, Tolerances (Physiology), Sodium, Excretion, Potassium, Toxicity, Pharmacology, Sympatholytic agents.

Shaposhnikov, V. N., Nefelova, M. V. and others
FORMATION OF NEW AURANTINE FRACTIONS AND STUDY OF THEIR CHEMICAL AND BIOLOGICAL PROPERTIES. 2 Apr 63 [8]p. 5 refs. JPRS: 18493.
Order from OTS $0.50 63-21476

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 147, no. 6, p. 1476-1479.

DESCRIPTORS: *Antibiotics, Culture media, Actinomycetales, Biochemistry, Chemical analysis, *Biological assay.

The conditions of formation of new aurantine fractions, their chemical composition, and their biological properties were investigated. It is shown that all fractions, as well as the original aurantine, prolong to a greater or lesser extent the life of mice with leucosis. The antileucosis effect is increased with increase in the general toxic action of any of the preparations. The various fractions are not equally toxic. In particular, the fractions which contain leucine in their structure (Au_5 and Au_7) have a lower toxic activity. This makes it possible to vary the dosages of these preparations over a wide range while maintaining an antileucosis effect which is the same (relative to the other fractions).

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ORAL PENICILLIN THERAPY (Orale Penicillinbehandlung). [1962] [5]p. 14 refs.
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DESCRIPTORS: *Penicillins, Mouth, Therapy, *Antibiotics, Sulfonamides, Children, Diseases, Streptococcus, Dosage.

The oral penicillin preparations tried by us, affected the streptococci infections of the nose- and pharyngeal tract as well as parenteral penicillin preparations in the same dosages. This experience can be applied also to such bacterial deseases which have the same sensitivity to the causative agent. About the effect on many other deseases, there are many literature data. In the case of severe infections, it is recommended to start the treatment with a parenteral dosage of penicillin G to obtain a fast response. The therapy can be then continued, if not contraindicated concerning the stomach- and intestine channels with peroral penicillin therapy. In our cases, the primary penicillin injection was not necessary. The allergic reactions did not have the cause in the penicillin itself, but very probably were caused with couppled sulfonamide component. The compability of the pure penicillin preparations was excellent. (Author)

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PRELIMINARY RESULTS OBTAINED IN MAN WITH THE USE OF DEMETHYLCHLORTETRACYCLINE (D. M. C. T.) 10.192 R. P. (Premiers Resultats Obtenus chez l'Homme par l'Utilisation de la Demethylchlortetracycline (D. M. C. T.) 10.192 R. P.). [1962] 12p.
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Trans. of Helv[etica] Physiol[ogica et Pharmacologica] Acta (Switzerland) 1962, v. 20, p. 291-293.

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Tuchmann-Duplessis, H. and Mercier-Parot, L.
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Trans. of Fédération des Sociétés de Gynécologie et d'Obstétrique de Langue Française. Bulletin, 1958, v. 10, p. 384-388.

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Vargas C., Luis and Izquierdo B., Arturo.
INVESTIGATIONS OF RECTAL ABSORPTION OF PENICILLIN AND STREPTOMYCIN FROM VARIOUS SUPPOSITORY BASES. [1963] 16p.
Order from SLA $1.60 63-10930

Trans. of Archiv d[er] Pharmazie (West Germany) 1961, v. 294 [no. 9] p. 153-163.

DESCRIPTORS: *Absorption (Biological), *Penicillins, *Streptomycins, Antibiotics, Drugs, Fats, Cocoa.

Vieira Mendonca, J.
ISMELIN-NAVIDRIX IN THE THERAPY OF HYPERTENSION (Ismelina-Navidrex no Tratamento da Hipertensao Arterial). Jan 63, 6p. 13 refs.
Order from SLA $1.10 63-10659

Trans. of a Folha Medica (Brazil) 1962, v. 44, May, p. 321-325.

DESCRIPTORS: *Chlorothiazide diuretics, *Guanethidine, Therapy, *Hypertension, Drugs, *Diuretics, Sympatholytic agents, Vasoactive agents, Excretion, Sodium, Potassium, Blood pressure, Pulse, Urea, Tolerance (Physiology).

The author selected 8 patients, 5 with essential hypertension and 3 with renal hypertension and tested the efficacy and tolerance of a new antihypertensive combination. In 6 the pressure values exceeded 200 and 120 mm. Hg. systolically and diastolically respectively, and they therefore were classified as severe hypertension: we were using the fixed combination of 10 mg. of guanethidine (Ismelin) and 0.15 mg. of cyclopenthiazide (Navidrix), the one a sympathicoplegic and the other a salidiuretic. 3-5 tablets daily were given (1 patient received 10 tablets) for 28 days and a satisfactory pressure reduction was obtained in 7 patients, while there were very few side effects. (Author)

Vinogradov, V. M. and D'yachenko, P. K.
THE UTILIZATION OF THE RESORPTIVE ACTION OF LOCAL ANESTHETICS IN SURGERY. [1962] 36p. (figs. omitted) 51 refs. [NIH]-182.
Order from OTS or SLA $3.60 62-23518

Trans. of Vestnik Khir[urgii] (USSR) 1957 [v. 78] no. 5, p. 12-24.

DESCRIPTORS: Anesthesia, *Local anesthetics, Surgery, Drugs, *Absorption, *Parentral infusions, Pharmacology, Toxicity, Procaine, Nervous system. Inhibition, Shock (Pathology).

With the intravenous administration of the local anesthetics, reflexes in the upper respiratory passages which are undesirable in narcosis are depressed, salivation and perspiration are suppressed, and nausea and vomiting are prevented, which is particularly important during transition to the administration of the basic narcotic. Narcosis proceeds smoothly and the stage of excitation does not develop. Emergence from narcosis is calm and gradual, with freedom from postnarcotic complications. Usually post-operative analgesia is present for a period of from 20 minutes to several hours. (Author)

Vita, J. A. de.
USE OF A NEW SALURETIC IN THERAPY OF OBESITY: CYCLOPENTHIAZIDE (Empleo de un Nuevo Saluretico en el Tratamiento de la Obesidad: la Ciclopentiacida). [1962] 7p. 8 refs.
Order from SLA $1.10 63-10541

Trans. of el Dia Medico (Argentina) 1961, v. 33, 4 Dec, p. 2904-2908.

DESCRIPTORS: *Chlorothiazide diuretics, Drugs, *Diuretics, *Body weight, Toxicity, Sulfonamides, Vasoactive agents, Urine, Excretion, Tolerances (Physiology), Body fluids, Diabetes.

Cyclopenthiazide, a new and active oral diuretic, was given to 15 obese patients to produce a rapid weight loss. The average weight loss was 2.953 Kg. The drug was perfectly well tolerated and the measurements of blood sodium and potassium conducted showed that it did not affect the electrolyte balance. (Author)

Zicha, L., Scheiffarth, F., and Grau, E.
COMPARATIVE INVESTIGATIONS OF THE EOSINOPENIC EFFECT OF VARIOUS GLUCOCORTICOID ESTERS, WITH SPECIAL CONSIDERATION OF THE METHOD OF APPLICATION. [1962] 12p. (figs. tables refs. omitted).
Order from SLA $1.60 63-10326

Trans. of Arzneimittel-Forsch[ung] (West Germany) 1961, v. 11, no. 7, p. 606-612.

DESCRIPTORS: *Dexamethasone, *Eosinophils, *Corticosteroid agents, Esters, *Prednisolone, Hormones, Adrenal glands, Pituitary gland, Dosage, Parenteral infusion, Intravenous injections, Drugs.

Zicha, L., Scheiffarth, F. and others.
COMPARATIVE INVESTIGATIONS ON NEW CORTICOID DERIVATIVES IN HISTAMINE AND SEROTONIN ASTHMA IN GUINEA PIGS (Vergleichende Untersuchungen mit Neueren Corticoid-Derivaten am Histamin- und Serotonin-Asthma des Meerschweinchens). [1962] 16p. (figs. tables refs. omitted) 7 refs.
Order from SLA $1.60 63-10325

Trans. of Arzneimittel-Forschung (West Germany) 1960, v. 10, no. 9, p. 728-731.

DESCRIPTORS: *Dexamethasone, Predisone, Corticosteroid agents, *Histamine, *Serotonin, *Asthma, Laboratory animals, Prednisolone, Aerosols,

Heinen, G., Krahe, M. and others.
EXPERIMENTAL-CLINICAL INVESTIGATIONS ON THE INFLUENCE OF A NEW SULFONAMIDE DIURETIC IN THE PATHOLOGICAL EDEMA OF PREGNANCY (Experimentell-Klinische Untersuchungen über die Beeinflussung des Pathologischen Schwangerschaftsödems mit einem Neuen Sulfonamiddiuretikum). [1962] 13p. 28 refs.
Order from SLA $1.60 63-10567

Trans. of Medizinische Klinik (West Germany) 1961, v. 56, 1 Sep, p. 1497-1501.

DESCRIPTORS: *Chlorothiazide diuretics, Drugs, Sulfonamides, Diuretics, *Edema, *Pregnancy, Toxicity, Tolerances (Physiology).

This is a report on clinical-experimental studies with a new diuretic, cyclopenthiazide, in normal pregnant women and patients with toxemia of pregnancy. (Author)

Ivanitskii, A. M.
SENSITIVITY OF ANIMALS TO DRUGS AFTER EXPOSURE TO Sr^{90}. [1963] [6]p. 6 refs. FASEB manuscript no. S 167-2.
Order from OTS or SLA $1.10 63-19376

Trans. of Meditsinskaya Radiologiya (USSR) 1962, v. 7, no. 7, p. 72-74.

DESCRIPTORS: Sensitivity, Animals, *Drugs, *Strontium, *Radiation effects, Radioactive isotopes, Barbiturates, Anesthetics, *Toxic tolerances, *Radiation sickness, Nervous system, Heart.

In the early stages of Sr^{90} poisoning (1.5 mC/kg), resistance to drugs is largely maintained at the level characteristic of the healthy animal. The largest decrease in the resistance of the affected animals was observed to the anesthetic substance hexobarbital. (Author)

Jacono, A., Vitale, P. and others.
COMPARATIVE EVALUATION OF THE DIURETIC AND SALURETIC ACTION OF HYDROCHLOROTHIAZIDE AND CYCLOPENTHIAZIDE, A NEW COMPOUND OF THE BENZOTHIADIAZINE GROUP (Valutazione Comparative dell'Azione Diuretica e Saluretica della Idroclorotiazide e della Ciclopentiazide, Nuovo Composto dell Gruppo Benzotiodiazinico). 21 Dec 62, 11p.
Order from SLA $1.60 63-10569

Trans. of Riforma Medica (Italy) 1961, v. 75, p. 1392-1396.

DESCRIPTORS: *Diuretics, *Chlorothiazide diuretics, Thiazines, Benzyl radicals, Excretion, Urine, Sodium, Potassium, Edema, Liver, Diseases, Heart, Drugs

The diuretic and saliuretic action of a new compound drug of the benzothiadiazine group, the cyclopenthiazide, on 11 heart-patients (failure cases) and 5 cases of cirrhosis with ascites were estimated. On another group of patients, selected and homogen (5 heart patients and 2 cirrhotic), a compared study between cyclopenthiazide (0.5-1mgm) and hydrochlorothiazide (50-100 mgm) was carried over. Both drugs were alternatively employed in each single case for short periods of 3 to 4 days. The cyclopenthiazide showed a diuretic and natriuretic action comparable to hydrochlorothiazide at a hundred times lesser dosage. Na/K relation appeared to be higher after the use of cyclopenthiazide in almost all heart patients; conversely in cirrhotic patients Na/K relation did not show any change. (Author)

Kolb, K. H., Kimbel, K. H., and Schulze, P. E.
THE INFLUENCE OF VARIOUS ANABOLIC STEROIDS ON THE EXCRETION OF DYES INTO THE BILE OF RATS. [1962] 8p. (figs. tables refs. omitted).
Order from SLA $1.10 63-10513

Trans. of Arzneimittel-Forschung (West Germany) 1962, v. 12, no. 3, p. 228-230.

DESCRIPTORS: Metabolism, *Steroids, Drugs, Excretion, Dyes, *Bile, Rats, *Liver, Iodine, Labeled substances, Chlorides, Sodium compounds, Inhibition, Androstene, Sulfobromophthalein sodium, Methyl radicals, Testosterone.

Using the example of the excretion of I^{131}-labeled rose bengal into the bile of rats, it was shown that all the 17-alkylated anabolically efficacious steroids which were tested more or less inhibited the dye-excretion capacity of the liver when administered orally for 21 days. The same thing applies to androstane-17-beta-ol-3-one, an anabolic not alkylated at the 17th place. 1-methyl-delta^1-androstene-17-beta-ol-3-one was the only one of the 8 compounds tested that had no influence on the excretion of the dye. (Author)

Komendantova, M. V.
THE IMPORTANCE OF THE ION COMPONENT IN THE PHARMACODYNAMICS OF AMINAZINE (Znachenie Ionnogo Komponenta v Farmakodinamike Aminazina) tr. by Wanda M. Feeley. Apr 61, 11p. PSC no. 60-691.
Order from OTS or SLA $1.60 62-24320

Trans. of Farmakologiya i Toksikologiya (USSR) 1960, v. 23, p. 99-105.

DESCRIPTORS: *Chlorpromazine, Drugs, *Ions, *CNS depressants, *Calcium compounds, Blood pressure, Respiration, Brain, Sensitivity, Chlorides, Esters, Electroencephalography.

Calcium salts provide a temporary restoration of the movement functions affected by aminazine. A fall of the blood pressure and depression of respiration, caused by aminazine, are not removed by calcium. A preliminary course of administration of calcium reduces the sensitivity of animals to aminazine. (Author)

Laschet, U. and Hohlweg, W.
TESTING RECENT GLUCOCORTICOID PREPARATIONS. [1962] 6p. (figs. refs. omitted).
Order from SLA $1.10 63-10504

Trans. of [die] Pharmazie (Germany) 1960, v. 15, p. 374-377.

DESCRIPTORS: Tests, *Corticosteroid agents, Drugs, *Prednisone, *Prednisolone, Pharmacology, Biological assay, Inhibition, Secretion, Thymus gland, Adrenal glands, Pituitary gland.

There is described a new and simple testing procedure for glucocorticoids. In the NTP test (the product of the adrenal gland weight and the thymus weight) consideration is given to both the peripheral glucocorticoid effect (thymus involution) and also to the central effect (adrenal atrophy through inhibition of the corticotropic function of the craviopharyngeal anterior lobe). The efficacy of prednisone, prednisolone, 6α-methyl-prednisolone, 9α-fluoro-16α-hydroxy-prednisolone and 9α-fluoro-16α-methyl-prednisolone was investigated by this process. (Author)

Meyer, R. de.
TERATOGENIC ACTION OF SUBSTANCES THAT DISTURB CARBOHYDRATE METABOLISM. [1962] [40]p. (figs. omitted).
Order from SLA $3.60 63-10520

Trans. of mono. Etude Experimentale de la Glycoregulation Gravidique et de l'Action Teratogene des Perturbations du Metabolisme Glucidique (Experimental Study of Glycoregulation in Pregnancy and of the Teratogenic Action of Disturbances in Glucose Metabolism) Paris, 1961, chap. 4, p. 173-190, 231-245.

DESCRIPTORS: *Anomalies, Drugs, Rats, *Pregnancy, Eye, Mouth, Brain, *Hypoglycemia, *Metabolism, *Carbohydrates, Sulfonamides, Embryos, Mitosis, Urinary system, Hemopoietic system, *Antimetabolites.

Protiva, Miroslav and others.
ANTIHISTAMINE SUBSTANCES. XXXI. CONTRIBUTION TO THE MECHANISM OF ACTION OF ANTIHISTAMINES (SIMPLE BENZYLAMINE AND BENZHYDRYL AMINE SALTS). Jan 63, 6p.
Order from SLA $1.10 63-10583

Partial trans. (p. 1621-1623) of Chemicke Listy (Czechoslovakia) 1953, v. 47 [no. 11] p. 1621-1632.

DESCRIPTORS: Drugs, *Antihistamines, *Benzyl radicals, *Amines, Salts, *Diphenylmethanes, Substitution reactions.
Cyclopenthiazide represents a new chlorothiazide diuretic which is very effective in the doses indicated and which because of its particularly favorable action on the potassium balance, can be used safely and securely. (Author)

Pupita, F.
DIURETIC ACTIVITY OF CYCLOPENTHIAZIDE (Sulla Attivita Diuretica della Ciclopentiazide). Nov 62, 8p. 6 refs.
Order from SLA $1.10 63-10186

Trans. of Gazz[etta] Internaz[ionale di] Med[icina e] Chir[urgia] (Italy) 1961, v. 66, p. 2304-2310.

DESCRIPTORS: *Diuretics, Drugs, Therapy, Potassium, Excretion, Urine, *Chlorothiazide diuretics, Vasoactive agents, Sympatolytic agents.

Experiments on the diuretic action of cyclopenthiazide prove clearly that the therapeutic action of the drug is undoubtedly different from that of hydrochlorothiazide in a positive sense. Its activity can be compared with that of the most recent thiazide derivatives; its truly slight influence on potassium excretion seems even to be less than that exerted by these latter preparations.

Röckl, H.
INITIAL EXPERIENCE WITH DEMETHYCHLORTETRACYCLIN (LEDERMYCIN) IN DERMATOLOGY. [1962] 5p. (figs. tables refs. omitted).
Order from SLA $1.10 63-10515

Trans. of Münch[ener] Med[izinsche] W[ochenschrift] (West Germany) 1961, v. 103, 3 Feb, p. 266-268.

DESCRIPTORS: *Antibiotics, *Skin, Steptomycins, Methyl radicals, Chlorides, Diseases, *Tetracyclines, Chemotherapy, Stability.

After an introductory explanation of the pertinent and most important experimental and clinical data of demethylchlortetracyclin, a report is made on the therapeutic experience obtained with a total of 125 in- and out-patients suffering from different skin diseases. In its antimicrobic effect, demethylchlortetracyclin corresponds to other tetracyclins. Intolerance disturbances occurred in some patients only in the form of reversible complaints as to the stomach-intestinal tract. Greater chemical stability and the longer stay of the drug in the body make it possible to reduce the daily dose to 600 mg, at only 12-hour intervals now, which is an advantage of equal importance to both patient and nursing personnel. (Author)

Schindelmaisser, F. and Klasterneuburg, M. D.
THE EXPERIENCE OF A PRACTITIONER WITH "OSPEN" PENICILLIN V: A NEW ACID STABLE ORAL PENICILLIN. [1962] 2p.
Order from SLA $1.10 63-10302

Trans. of Wien[er] Med[izinische] W[ochenschrift] (Austria) 1954, v. 104, no. 18, p. 369.

DESCRIPTORS: *Antibiotics, *Penicillins, Mouth, Therapy, Medical personnel, Hydrogen ion concentration.

"Ospen" is a valuable novelty for the therapy of a practitioner, esp. for terrain-physician. It performs a continuous penicillin therapy which sometimes was not possible up to now because of some circumstances. "Ospen" therapy gives more free time to the physician, and patients themselves are free from the injection fear. The danger of penicillin misuse, because of the oral application, is not too big considering a proper explanation and orientation. It is true that this danger will always exist because of improper dosages, or cutting off the therapy too early. (Author)

Schnider, U.
COMBINATION THERAPY OF HYPERTENSION WITH GUANETHIDINE-CHLOROTHIAZIDE DERIVATIVES (ISMELIN-ESIDRIX AND ISMELIN-NAVIDRIX) (Die Kombinationsbehandlung der Hypertonie mit Guanethidine-Chlorothiazid-Derivaten (Ismelin-Esidrex und Ismelin-Navidrex)). Jan 63, 15p. 17 refs.
Order from SLA $1.60 63-10724

Trans. of Schweiz[erische] Med[izinische] W[ochenschrift] 1962, v. 92, 15 Sep, p. 1127-1132.

DESCRIPTORS: Therapy, *Hypertension, Drugs, Diuretics, Vaso active agents, Sympatholytic agents, *Guanethidine, Tranquilizers, Blood pressure, Corticosteroids, *Chlorothiazide diuretic.

The combination therapy of essential hypertension by means of the elective sympathetic inhibitor guanethidine and the chlorothiazide derivatives, hydrochlorothiazide (Esidrix) and cyclopenthiazide (Navidrix) was studied in detail on 70 cases. By means of 5 cases the problems of treating nephrogenic hypertension is discussed; also the effect of guanethidine on the hypertension secondarily produced by corticosteroid therapy (dexamethasone) is examined (3 cases). (Author)

Schroder, R.
STUDIES ON THE RELATION BETWEEN ANGIOTENSIN INFUSION AND ALDOSTERONE SECRETION (Untersuchungen über die Beziehung Zwischen Angiotensininfusion und Aldosteronsekretion). [1963] 6p. 13 refs.
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Shaposhnikov, V. N., Nefelova, M. V. and others
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DESCRIPTORS: *Penicillins, Mouth, Therapy, *Antibiotics, Sulfonamides, Children, Diseases, Streptococcus, Dosage.

The oral penicillin preparations tried by us, affected the streptococci infections of the nose- and pharyngeal tract as well as parenteral penicillin preparations in the same dosages. This experience can be applied also to such bacterial deseases which have the same sensitivity to the causative agent. About the effect on many other deseases, there are many literature data. In the case of severe infections, it is recommended to start the treatment with a parenteral dosage of penicillin G to obtain a fast response. The therapy can be then continued, if not contraindicated concerning the stomach- and intestine channels with peroral penicillin therapy. In our cases, the primary penicillin injection was not necessary. The allergic reactions did not have the cause in the penicillin itself, but very probably were caused with couppled sulfonamide component. The compability of the pure penicillin preparations was excellent. (Author)

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Order from SLA $1.60 63-10386

Trans. of Sem[aine des] Hôp[itaux de Paris] (France) 1962, v. 38, 8 May, p. 1593-1596.

DESCRIPTORS: *Biological assay, *Declomycin, Antibiotics, *Tetracyclines, Drugs, Dosage, Tolerances (Physiology), Toxicity, Chemotherapeutic agents, Communicable diseases.

Tripod, J. and Keberle, H.
BIOLOGICAL TRIALS WITH DESFERRIOXAMINE (Essais Biologiques avec la Desferrioxamine). [1962] 4p. 5 refs.
Order from SLA $1.10 63-10542

Trans. of Helv[etica] Physiol[ogica et Pharmacologica] Acta (Switzerland) 1962, v. 20, p. 291-293.

DESCRIPTORS: *Drugs, *Biological assay, *Iron compounds, Amides, *Oximes, Iron, Excretion, Urine, Laboratory animals.

Tuchmann-Duplessis, H. and Mercier-Parot, L.
THE PRODUCTION OF OCULAR MALFORMATIONS BY ADMINISTRATION OF A HYPO-GLYCEMIC SULFONAMIDE TO THE PREGNANT RAT. 3 Dec 62. 5p. (figs. tables omitted) 3 refs.
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Trans. of Fédération des Sociétés de Gynécologie et d'Obstétrique de Langue Française. Bulletin, 1958, v. 10, p. 384-388.

DESCRIPTORS: *Eye, *Anomalies, Drugs, Hypoglycemia, *Sulfonamides, *Pregnancy, Rats, *Orinase, Diabetes.

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Trans. of a Folha Medica (Brazil) 1962, v. 44, May, p. 321-325.

DESCRIPTORS: *Chlorothiazide diuretics, *Guanethidine, Therapy, *Hypertension, Drugs, *Diuretics, Sympatholytic agents, Vasoactive agents, Excretion, Sodium, Potassium, Blood pressure, Pulse, Urea, Tolerance (Physiology).

The author selected 8 patients, 5 with essential hypertension and 3 with renal hypertension and tested the efficacy and tolerance of a new antihypertensive combination. In 6 the pressure values exceeded 200 and 120 mm. Hg. systolically and diastolically respectively, and they therefore were classified as severe hypertension: we were using the fixed combination of 10 mg. of guanethidine (Ismelin) and 0.15 mg. of cyclopenthiazide (Navidrix), the one a sympathicoplegic and the other a salidiuretic. 3-5 tablets daily were given (1 patient received 10 tablets) for 28 days and a satisfactory pressure reduction was obtained in 7 patients, while there were very few side effects. (Author)

Vinogradov, V. M. and D'yachenko, P. K.
THE UTILIZATION OF THE RESORPTIVE ACTION OF LOCAL ANESTHETICS IN SURGERY. [1962] 36p. (figs. omitted) 51 refs. [NIH]-182.
Order from OTS or SLA $3.60 62-23518

Trans. of Vestnik Khir[urgii] (USSR) 1957 [v. 78] no. 5, p. 12-24.

DESCRIPTORS: Anesthesia, *Local anesthetics, Surgery, Drugs, *Absorption, *Parentral infusions, Pharmacology, Toxicity, Procaine, Nervous system. Inhibition, Shock (Pathology).

With the intravenous administration of the local anesthetics, reflexes in the upper respiratory passages which are undesirable in narcosis are depressed, salivation and perspiration are suppressed, and nausea and vomiting are prevented, which is particularly important during transition to the administration of the basic narootic. Narcosis proceeds smoothly and the stage of excitation does not develop. Emergence from narcosis is calm and gradual, with freedom from post-narcotic complications. Usually post-operative analgesia is present for a period of from 20 minutes to several hours. (Author)

Vita, J. A. de.
USE OF A NEW SALURETIC IN THERAPY OF OBESITY: CYCLOPENTHIAZIDE (Empleo de un Nuevo Saluretico en el Tratamiento de la Obesidad: la Ciclopentiacida). [1962] 7p. 8 refs.
Order from SLA $1.10 63-10541

Trans. of el Dia Medico (Argentina) 1961, v. 33, 4 Dec, p. 2904-2908.

DESCRIPTORS: *Chlorothiazide diuretics, Drugs, *Diuretics, *Body weight, Toxicity, Sulfonamides, Vasoactive agents, Urine, Excretion, Tolerances (Physiology), Body fluids, Diabetes.

Cyclopenthiazide, a new and active oral diuretic, was given to 15 obese patients to produce a rapid weight loss. The average weight loss was 2.953 Kg. The drug was perfectly well tolerated and the measurements of blood sodium and potassium conducted showed that it did not affect the electrolyte balance. (Author)

Zicha, L., Scheiffarth, F., and Grau, E.
COMPARATIVE INVESTIGATIONS OF THE EOSINOPENIC EFFECT OF VARIOUS GLUCOCORTICOID ESTERS, WITH SPECIAL CONSIDERATION OF THE METHOD OF APPLICATION. [1962] 12p. (figs. tables refs. omitted).
Order from SLA $1.60 63-10326

Trans. of Arzneimittel-Forsch[ung] (West Germany) 1961, v. 11, no. 7, p. 606-612.

DESCRIPTORS: *Dexamethasone, *Eosinophils, *Corticosteroid agents, Esters, *Prednisolone, Hormones, Adrenal glands, Pituitary gland, Dosage, Parenteral infusion, Intravenous injections, Drugs.

Zicha, L., Scheiffarth, F. and others.
COMPARATIVE INVESTIGATIONS ON NEW CORTICOID DERIVATIVES IN HISTAMINE AND SEROTONIN ASTHMA IN GUINEA PIGS (Vergleichende Untersuchungen mit Neueren Corticoid-Derivaten am Histamin- und Serotonin-Asthma des Meerschweinchens). [1962] 16p. (figs. tables refs. omitted) 7 refs.
Order from SLA $1.60 63-10325

Trans. of Arzneimittel-Forschung (West Germany) 1960, v. 10, no. 9, p. 728-731.

DESCRIPTORS: *Dexamethasone, Predisone, Corticosteroid agents, *Histamine, *Serotonin, *Asthma, Laboratory animals, Prednisolone, Aerosols,

Zicha, L., Schmid, E. and others.
COMPARATIVE INVESTIGATIONS ON THE ONSET AND DURATION OF ACTION OF NEW DEXAMETHASONE AND PREDNISOLONE ESTERS IN HISTAMINE AND SEROTONIN ASTHMA IN GUINEA PIGS (Vergleichende Untersuchungen über Wirkungseintritt und Wirkungsdauer Neuer Dexamethason- und Prednisolon-Ester am Histamin- und Serotonin- Asthma des Meerschweinchens). [1962] 14p. (figs. refs. tables omitted) 4 refs.
Order from SLA $1.60 63-10356

Trans. of Arzneimittel-Forsch[ung] (West Germany) 1960, v. 10, no. 10, p. 831-834.

DESCRIPTORS: Drugs, *Progesterone, Esters, *Corticosteroid agents, *Asthma, Serotonin, Histamine, Laboratory animals, Guinea pigs.

Zöllner, N. and Parrisius, G.
ON THE PRACTICAL SIGNIFICANCE OF DEMETHYLCHLORTETRACYCLINE-INDUCED PHOTOSENSITIZATION (Über die Praktische Bedeutung der Photosensibilisierung durch Demethylchlortetracyclin). [1962] 10p. 15 refs.
Order from SLA $1.10 63-10384

Trans. of Med[izinische] Klin[ik] (West Germany) 1962, v. 57, 27 Apr, p. 749-752.

DESCRIPTORS: *Photosensitivity, *Antibiotics, Methyl radicals, Chlorides, *Tetracyclines, Chemotherapy, Solar radiation, Skin, Burns, Toxicity, Streptomycins.

Following a brief description of the photosensitization produced by demethylchlortetracycline, observations are reported on patients receiving long-term therapy with this antibiotic. In patients who have suffered a phototoxic reaction to sunlight, renewed exposure to sunlight while under demethylchlortetracycline therapy either caused no reaction to the light or only a slight reaction. Patients who, during the course of the summer, have already become accustomed to sunlight, show no reaction to sunlight during therapy with demethylchlortetracycline. The phototoxic reaction occurring during demethylchlortetracycline therapy appears to follow a course very much like a common sunburn, i.e. leaving behind it relative insensitivity. This finding makes it possible to greatly curtail the contraindications for demethylchlortetracycline; only those persons who, due to occupational or other circumstances, are exposed to very intense solar radiation or to solar radiation stronger than that to which they are accustomed, should be excluded from ambulant demethylchlortetracycline therapy. (Author)

Radiobiology

RADIOBIOLOGY, 1961, VOL. 1, NO. 5. Mar 63, 236p.
Order from OTS $3.00 AEC-tr-5426

Trans. of Radiobiologiya (USSR) 1961, v. 1, no. 5, p. 641-814.

DESCRIPTORS: *Radiobiology, Molecular structure, *Proteins, *Radiation effects, Chemical bonds, Stability, *Hemoglobin, Amines, Ethyl radicals, Thio radicals, *Hypothermia, Cells (Biology), *Metabolism, *Plants (Botany), Cancer, Enzymes, Inhibition, Excretion, Strontium, *Ribonucleic acids, *Urea, Peroxides, Radiation injuries, *Carbonic anhydrase, Radiation sickness, *Acetylcholine, Radiochemistry, *Phenylalanine, *Electrophoresis, Blood proteins, *Cholinesterase, Fats, Liver, *Glutathione, Tissues (Biology), Leukocytes, *Actinomyces, Genetics, Adrenal glands, Excision, Phospholipids, Amino acids, *Antigens and antibodies, Bone marrow, Milk, Epinephrine, Dosage, *Anesthesia, *Brain, Morphology, X-rays, *Reproductive system, *Radioprotective agents, *Tryptophan, Dynamics, *Mutations, *Motor reactions, *Wheat, *Escherichia, Culture media

Contents:
Physicochemical and structural properties of irradiated monomolecular protein layers, by V. K. Tkach and V. V. Sidyakin
Mechanism of radiobiological labilization of hemoglobin, by E. A. Bauman
Study of mechanism of protective action of aminoethylisothiouronium on mice irradiated in a state of hypothermia, by E. Ya. Graevskii and M. M. Konstantinova
Effect of temperature and oxygen on primary changes occurring in irradiated cells, by E. M. Karabaev and V. I. Korogodin
Nature of metabolites formed in irradiated plant leaves, by A. M. Kuzin and others
Total excretion of dische-positive substances and deoxycytidine with urine in rats affected by strontium-90, by M. S. Uspenskaya
Effect of extracts from irradiated plants on growth of various normal rat tissues and tumor tissue of Guerin's carcinoma, by L. M. Kryukova and others
Enzymatic breakdown of appendix deoxyribonucleoproteins after total-body gamma irradiation, by N. V. Ermolaeva
Effect of urea peroxide on radiation injury to infusoria, by A. S. Popov
Change in activity of carbonic anhydrase in acute radiation sickness, by K. V. Ivanov and A. I. Dmitriev
Effect of gamma-irradiation on acetylcholine metabolism in rats, by N. V. Korneeva
Radiochemical transformations of phenylalanine, by E. M. Lapinskaya and others
Content of protein and nonprotein SH groups in tissues of rats and rhesus monkeys during development of radiation injury, by M. A. Lomova
Effect of thermal denaturation on electrophoretic mobility of blood serum proteins synthesized in irradiated organism, by M. I. Ravich-Shcherbo and L. G. Prokopenko
Cholinesterase activity of blood serum and fatty infiltration of liver in dogs surviving acute radiation sickness, by B. I. Davydov and Yu. A. Klassovskii
Glutathione content of blood vessel tissues of guinea pigs injured by ionizing radiation, by L. I. Polikarpova
Development of early radiation effect in leucocytes of pheripheral blood irradiated in vitro, by P. I. Pinto
Comparative mutacility of some loci in strains of actinomyces olivaceus obtained by genetic transduction, by S. V. Kameneva and S. I. Alikhanyan
Effect of adrenalectomy on phospholipid and amino acid metabolsim in irradiated animals, by T. N. Protasova and A. S. Kainova

Antigenic properties of bone marrow tissue in irradiated dogs, by G. M. Livitsyna and Yu. D. Balika
Serological and hemotological aspects of the response of dogs to vaccination at late periods after administration of radioactive strontium, by V. F. Sosva and others
Leucocyte reaction to milk and adrenaline in dogs at late stages after chronic exposure to ionizing radiation, by L. V. Bogatov
Experimental information on fixing the LD 50 for animals irradiated at different periods of post-natal development, by V. V, Kholin
Effect of ionizing radiation on the duration of anesthesia, by K. K. Poplavskii
Electrophysiological investigation of the brain stem tonic reflexes in irradiated animals, Z. A. Yanson
Analysis of the influence of the hypothalamic region on the course of spinal reflexes after local irradiation. I. Irradiation of the rabbit head, by Z. M. Gvozdikova
Morphological changes in dogs at late times after whole-body X-irradiation, by A. F. Bibikova and V. I. Ponomar'kov
Effect of X-rays on the reproductive system of female white rats irradiated in conditions of hypothermia, by L. G. Konekova
Protective action of certain inhibitors of oxidative chain processes in acute radiation sickness, by A. A. Gorodetskii and others
Mechanism of radio protective effect of 5-hydroxytryptophan, by P. G. Zherebchenko and others
Use of visible light in the study of the kinetics of mutagenesis, by L. I. Erokhina and S. I. Alikhanyan
Effect of ionizing radiation on the development of motor reflexes in the embryo after whole-body irradiation of male rabbits, by V. V. Yakovlev
Experimental mutations in spring wheat and their implications for selection, II, by P. K. Shkvarnikov and I. V. Chernyi
Integral dose in cylindrical objects from a hollow cylindrical radiation source, by V. I. Popov and others
X-ray induction of phage by lysogenic cultures of E. Coli, by R. A. Ter-Pogosyan and A. V. Tatevosyan

Balabukha, V. S. and Razumovskii, N. O.
ELIMINATING RADIOSTRONTIUM FROM THE ORGANISM. 26 Apr 63, 8p. 48 refs. JPRS: 18936.
Order from OTS $0.50 63-21695

Trans. of Meditsinskaya Radiologiya (USSR) 1963 [v. 8] no. 3, p. 71-76.

DESCRIPTORS: *Radioactive isotopes, *Strontium, Radiobiology, Tissues (Biology), Bone, Diet, Metabolism.

A survey of the literature.

Balabukha, V. S., Razbitnaya, L. M. and others.
REMOVING RADIOACTIVE ISOTOPES FROM ORGANISMS [AND] CONCLUSIONS. 18 Apr 63 [15]p. 13 refs. JPRS: 18775.
Order from OTS $0.50 63-21608

Trans. of mono. Problema Vyvedeniya iz Organizma Dolgozhivushchikh Radioaktivnykh Izotopov (Problems of Eliminating Long-Lived Radioactive Isotopes from the Organism) Moscow, 1962, p. 5-12 and 166-167.

DESCRIPTORS: Decontamination, *Radioactive isotopes, *Absorption (Biological), Ion exchange, Complex compounds, Excretion, Radioactive fall-out. *Health physics.

Collet, R. A.
APPLICATION OF RADIO-ISOTOPES TO THE STUDY OF PROTEINS (Application des Radio-Isotopes à l'Étude des Protéines). Feb 63, 5p.
Order from SLA $1.10 63-10925

Trans. of Schweiz[erische] Med[izinische] W[ochenschrift] 1960, v. 90, p. 1163-1164.

DESCRIPTORS: *Radioactive isotopes, *Proteins, Radiobiology, Labeled substances, Tyrosine, Albumins, Tritiated compounds, Scintillation counters *Blood proteins, Erythrocytes, Fibrinogen, *Tracer studies.

Durmish'yan, M. G. and Lebedinskii, A. V. eds.
REACTIONS OF THE BODY TO THE EFFECT OF LOW DOSES OF IONIZING RADIATION: SELECTED [PARTS]. 13 May 63, 81p. 48 refs. JPRS: 19163.
Order from OTS $2.25 63-21809

Trans. of mono. Reaktsii Organizma na Deistvie Malykh Doz Ioniziruyushchei Radiatsii, Moscow, 1962, p. 3-28, 219-247, 251-259, 302-303.

DESCRIPTORS: *Radiation effects, Dosage, *Excretion, Rats, Rabbits, *Radioactive isotopes, Radiobiology, Nervous system, Cobalt, Cesium, Bromine, Iodine, Sodium.

Contents:
Foreword
The reactions of the body to the effect of low doses of ionizing radiation, by M. G. Durmish'yan
Some characteristics of excretion of radioactive sodium from the bodies of white rats and rabbits, by V. P. Godin and others
Rates of excretion of Co^{60} and Cs^{137} from the bodies of animals, by S. I. Gorshkov and A. F. Denisov
Excretion of Br^{82} and I^{131} from the bodies of white rats, by S. I. Gorshkov and A. F. Denisov
The effect of factors of a non-radioactive nature on the rate of Na^{24} excretion, by V. P. Godin
Determination of the rules and regulations of excretion of radioactive substances in the calculation of internal doses of irradiation, by A. F. Denisov
Table of contents.

Fedorov, A. F.
BIOLOGICAL INDICATORS OF WEAK RADIOACTIVE CONTAMINATIONS IN NORTHERN SEAS. 9 Apr 63 [8]p. 7 refs. JPRS: 18633.
Order from OTS $0.50 63-21551

Trans. of Nauchnye Doklady Vysshei Shkoly. Biologicheskie Nauki (USSR) 1963, no. 1, p. 92-95.

DESCRIPTORS: *Radiological contamination, Oceans, Radioactivity, *Plankton, Aquatic animals, Measurement, *Crustacea, Radiobiology, Marine biology, Mathematical analysis.

Studying several regularities of the concentration and removal of the various radioactive substances in the most widespread forms of ocean organisms, it is established that a mixture of sea-inhabiting zooplankton organisms can be used as a biological indicator for the northern seas. The main component of the mixture is the plankton crayfish Calanus finmarchicus, part of the order Copepoda. As is known, Calanus finmarchicus is the most widespread zooplankton of the Barents, the White, and Kara seas. An estimate of the radioactivity of ocean water by means of biological indicators (in particular, using zoo- and nannoplankton) can be accomplished on the basis of simple mathematical functions. (Author)

Gorodinskii, S. M., Parkhomenko, G. M. and others.
RADIATION HYGIENE. VOL. 1. HYGIENE WORKS: SELECTED PARTS. 26 Mar 63 [170]p. 292 refs.
FTD-TT-62-1616; AD-401 728.
Order from OTS or SLA $12.00 63-19258

Unedited rough draft trans. of mono. Radiatsionnaya Gigiena. v. 1, Gigiena Truda, Moscow, 1962, p. 5-39, 87-108, 126-137.

DESCRIPTORS: *Radiation effects, *Public health, Radiobiology, *Protective clothing, Eyeglasses, Shoes, Gloves, Materials, Respirators, *Decontamination, Radiological contamination, *Dosimeters, Radiation monitors, Ionization chambers, Radiometers, *Health physics.

Contents:
Ionizing Radiation and Its Effects on the Human Organism
Individual Protection Devices, Personal Hygiene, and Problems of Decontamination
Dosimetric and Medical Monitoring

Graevskii, E. Ya.
THEORETICAL ASPECTS OF THE CHEMICAL PROTECTION OF MAMMALS FROM IONIZING RADIATION. 26 Apr 63, 25p. 157 refs. JPRS: 18918.
Order from OTS $0.75 63-21688

Trans. of Zhurnal Obshchei Biologii (USSR) 1963, v. 24, no. 1, p. 3-22.

DESCRIPTORS: *Mammals, *Radioprotective agents, Biochemistry, Ionization, Sulfur compounds, Radiation injuries, Hypoxia, Radiation effects.

Topics include: Radiation protective substances (sulfur-bearing substances, substances with clearly differentiated pharmacological and toxicological activity, metabolic products and inert compounds); manifestation and criteria of the protective effect; and, operation of the protective substances (chemical protection as the result of oxygen elimination, as the result of free radicals, through influence on the structural components of the cell, through influence on metabolic processes).

Horodets'kyi, O. O. and Baraboi, V. A.
PREVENTION AND TREATMENT OF ACUTE RADIATION SICKNESS IN DOGS WITH THE AID OF SODIUM GALLATE. 20 May 63, 6p. 2 refs.
JPRS: 19269.
Order from OTS $0.50 63-21852

Trans. of Fiziologichnyi Zhurnal (USSR) 1963, v. 9, no. 2, p. 240-244.

DESCRIPTORS: Therapy, Medicine, Dogs, *Radiation sickness, Diseases, *Sodium compounds, *Gallic acid, Chemotherapeutic agents, Hematology, Survival.

The intravenous administration of sodium gallate to dogs 30 minutes prior to irradiation with a dose of 600 r led to the survival of three out of five animals and caused a prolongation by seven to ten days of the average length of life of the animals which died. The administration of sodium gallate immediately after irradiation of dogs with the dose of 600 r also led to survival of three dogs out of seven and to increased length of life of the animals which later died by an average of six days. The anti-radiation influence of sodium gallate when given before as well as after irradiation loads to a mitigation of the severeity of the clinical course of radiation sickness, and loads to a postponement by four to eight days or more of the period of fulminating radiation sickness. (Author)

Ivanov, A. E.
PATHOANATOMICAL RADIATION-INDUCED CHANGES IN LUNGS, tr. by Helen Basil. Feb 63, 119p. 270 refs.
Order from OTS $2.50 AEC-tr-5500

Trans. of mono. Patologoanatomicheskie Izmeneniya Legkikh pri Luchevoi Bolezni, Moscow, 1961.

DESCRIPTORS: Pathology, Anatomy, *Radiation effects, *Lungs, Etiology, Radiation hazards, Radio-active decay, *Cancer, Cystochemistry, Radiation sickness, Absorption (Biological), *Carcinogenic agents, Neoplasms.

Contents:
Introduction
Sectional External Irradiation of Pulmonary Tissues
Inhalation Affection Of Lungs
Lung Changes In Conditions Of Lungs
Lung Changes In Conditions Of Total Body Irradiation
Histochemical Investigations Of Lungs In Radiation Illness
Problems Of Pathogenesis

Kurshakov, N. A. Rynkova, N. N. and others.
THE USE OF ACTH AND ADRENAL CORTICAL HORMONES ON INDIVIDUALS WHO HAVE BEEN EXPOSED TO THE EFFECT OF IONIZING RADIATIONS. 6 May 63, 8p. 22 refs. JPRS: 19066.
Order fromOTS $0.50 63-21754

Trans. of Problemy Endokrinologii i Gormonoterapii (USSR) 1963 [v. 9] no. 2, p. 73-76.

DESCRIPTORS: *Adrenocorticotropic hormone, Ionization, *Radiation effects, *Corticosteroid agents, *Prednisolone, Radioprotective agents.

The use of pathogenetic therapy (ACTH, cortisone, prednisolone) in individuals who had been subjected to radiation effects improves their general condition, raises the amount of leucocytes, neutrophiles, and thrombocytes, with a simultaneous reduction of the number of eosinophiles, and leads less frequently to

moderate lymphopenia and monocytopenia. The appearance in the peripheral blood of a left nuclear switch to myelocytes and promyelocytes in response to the administration of the above-mentioned hormonal preparations may indicate an accelerated maturation and washing out of cells of the white order. Prednisolone therapy in Werlhov's syndrome may lead the patients out of the thrombopenic crisis, and the prolonged use of small doses of this preparation will maintain the achieved effect. (Author)

Livanov, M. N.
CERTAIN PROBLEMS OF THE EFFECT OF IONIZING RADIATION ON THE NERVOUS SYSTEM: [SELECTED PARTS]. 20 May 63, 44p. JPRS: 19284.
Order from OTS $1.25 63-21865

Trans. of mono. Nekotorye Problemy Deistviya Ioniziruyushchei Radiatsii na Nervnuyu Sistemu, Moscow, 1962, p. 24-47, 174-177, 195-196.

DESCRIPTORS: *Radiation effects, *Nervous system, Brain, Spinal cord, Radiobiology, Radiation sickness, Ulcers, Nerves, *Bioelectronics, Dosage, Inhibition, Gamma rays, Conditioned reflex, Sensitivity, *Cerebral cortex.

Contents:
Chap. 2: Basic mechanisms of the effect of ionizing radiation on the nervous system
Reflected effect of radiation upon the central nervous system
Changes in the neural centers as the result of radiation effect on the periphery
Conclusion
Table of contents.

Makhonina, G. I. and others.
VERSUCH EINER EXPERIMENTELLEN UNTERSUCHUNG DER VERTEILUNG VON RADIOISOTOPEN IN KUENSTLICHEN BIOGEOZÖNOSEN (An Attempt to Analyse the Distribution of Radio-Isotopes over Natural Biogeocenoses). 6p.
Order from TIB $1.30

Trans. in German of Akademiya Nauk SSSR, Doklady, 1960, v. 133, no. 2, p. 484-487.

DESCRIPTORS: Analysis, *Radioactive isotopes, Biology, *Plants (Botany)

Peredel'skii, A. A., Bogatyrev, I. O. and Karavyanskii, N. S.
DER EINFLUSS VON REGENWUERMERN UND DRAHTWUERMERN AUF DIE AUFNAHME DER RADIOAKTIVEN ISOTOPE Ca^{45} UND Sr^{90} AUS DEM BODEN DURCH PFLANZEN (The Influence of Earthworms (Lumbricidae) and of Wireworms (Elateridae) on the Incorporation of Radioactive Isotopes Ca^{45} and Sr^{90} by Plants from the Soil). 4p.
Order from TIB $1.10

Trans. in German of Akademiya Nauk SSSR, Doklady, 1960, v. 134, no. 6, p. 1450-1452.

DESCRIPTORS: *Worms, *Radioactive isotopes, *Calcium, *Strontium, Plants, (Botany), Soils.

Peterson, O. P., Berezina, O. N. and others.
THE EFFECT OF IONIZING RADIATION ON VIRUS INFECTIONS AND ANTIVIRUS IMMUNITY. Feb 63, 179p. 309 refs. NASA N63-11635.
Order from OTS $2.75 AEC-tr-5579

Trans. of mono. Vliyanie Ioniziruyushchego Izlucheniya na Virusnye Infektsii i Protivovirusnyi Immunitet, Moscow, 1961 [165p.]
A partial trans. (foreword, introduction, conclusions) is available from OTS or SLA $1.60 as 62-15960, JPRS-12428, 9 Feb 62 [16]p.

DESCRIPTORS: *Ionization, *Radiation effects, *Virus diseases, *Immunity, Virus vaccines, Radiation sickness, *Influenza viruses, *Encophalitis viruses, *X-rays, Antigens and antibodies, Antigen-antibody reactions.

Contents:
Natural Resistance and Acquired Antivirus Immunity in Conditions of Acute Radiation Sickness
The Effect of Ionizing Radiation on the Mechanisms of Natural Antivirus Immunity
The Effect of Irradiation on Susceptibility to the Influenza Virus and the Course of the Influenza Infection in Susceptible and Naturally Resistant Animals
Susceptibility of Irradiated Animals to Certain Neurotropic Viruses.
The Effect of Ionizing Radiation on Acquired Immunity to Influenza and Encephalomyocarditis Viruses.
Natural Resistance and Immunity to Influenza Under Conditions of Chronic Radiation Sickness
The Biological Effect of Prolonged Irradiation with Small Doses of X-Rays
The Effect of Chronic Irradiation with Low Doses of X-Rays on the Susceptibility of White Mice to the Influenza Virus
The Effect of Chronic Irradiation with Low Doses of X-Rays on the Creation of Immunity to Influenza and Antibody Production in Laboratory Animals.

Timofeeva, N. A.
ZUR FRAGE DER WANDERUNG VON RADIOSTRONTIUM IN BIOGEOZÖNOSEN (On the Migration of Radioactive Strontium in Biogeocenoses). 6p.
Order from TIB $1.30

Trans. in German of Akademiya Nauk SSSR. Doklady, 1960, v. 133, no. 2, p. 488-491.
Another trans. is available in French from OTS or SLA $1.10 as 62-25077, CEA-tr-R1484, 24 Mar 62 [9]p.

DESCRIPTORS: *Radioactivity, *Strontium, Biology, *Plants (Botany)

Surgery

ORTHOPEDICS, TRAUMATOLOGY, AND PROSTHETICS, 1963 [VOL. 24] NO. 2: [SELECTED] ARTICLES. 20 May 63, 22p. 16 refs. JPRS: 19281.
Order from OTS $0.75 63-21862

Trans. of Ortopediya, Travmatologiya i Protezirovanie (USSR) 1963, v. 24, no. 2, p. 3-9, 18-21, 67-68.

DESCRIPTORS: *Orthopedics, Traumatic shock, *Prosthetics, Morphology, *Bone, Plastic surgery, *Transplantation, Freezing, *Femur, Wounds, Healing, Plastic films, *Polyvinyl chloride.

Contents:
Morphologic characteristics of changes in homoplasty of bones preserved by refrigeration, by N. A. Zvonkov and T. N. Belyakova
Regeneration of bone tissue of the femur transplantation of the extremity, by A. D. Khristich and K. I. Katonin
Treatment of wounds with polychlorvinyl film dressing under polyclinical conditions, by R. Sh. Breitman.

Decroix, G., Libersa, C., and Lattard, R.
THE ANATOMICAL AND PHYSIOLOGICAL FOUNDATIONS OF VOICE RE-EDUCATION IN LARYNGECTOMEES. [1962] 31p. (figs. refs. omitted).
Order from SLA $3.60 63-10718

Trans. of Journal Français d'Oto-[Rhino]-Laryngologie, 1958, v. 7, no. 5, p. 549-573.

DESCRIPTORS: Anatomy, Physiology, *Speech, Surgery, *Larynx, Education, *Adaptation (Physiology), *Esophagus, Nerves, Otorhinolaryngology, Speech disorders.

The authors report, in part, on anatomical research work on the pharyngo-esophageal region, and specifically on the innervation of that region. In the light of concepts of phonatory physiology which they defend they expound the anatomical and physiological fundamentals of voice re-education in the case of laryngectomees. They draw conclusions from them as to the possibility and the technique to be used for the purpose of insuring a correct esophageal voice. (Author)

Pankrat'ev, B. E., ed.
TEXTBOOK OF SURGERY: CHAP. XXIX AND TABLE OF CONTENTS. 20 May 63, 37p. (some figs. omitted) JPRS: 19278.
Order from OTS $1.00 63-21860

Trans. of mono. Rukovodstvo po Khirurgii, Moscow, 1962, p. 5-9 and 710-726.

DESCRIPTORS: *Surgery, *Wounds and injuries, *Radiation effects, Radioactive isotopes, Gamma rays, Beta particles, *Radiation sickness, Health physics.

Contents:
Wounds and ionizing radiation, by B. M. Khromov
Table of contents.

Zoology

FISHING INDUSTRY PLENUMS NOS. 6-7 ON RESEARCH IN THE WESTERN SECTION OF THE PACIFIC OCEAN. 29 Apr 63, 9p. JPRS: 18957.
Order from OTS $0.50 63-21708

Trans. of Rybnoe Khozyaistvo (USSR) 1963 [v. 39] no. 1, p. 85, 87-90.

DESCRIPTORS: *Fisheries, *Fishes, Pacific Ocean, Marine biology, Growth, Industrial production.

Baburina, E. A.
DEVELOPMENT OF EYES AND THEIR FUNCTION IN EMBRYOS AND LARVAE OF PIKE PERCH (LUCIOPERCA LUCIOPERCA LINNE) (Razvitie Glaz i Ikh Funktsii u Zarodyshei i Lichinok Sudaka (Lucioperca lucioperca Linne). 8 Mar 63 [32]p. 27 refs. NIH no. 3-11-63.
Order from OTS or SLA $3.60 63-19101

Trans. of A[kademiya] N[auk] SSSR. Inst[itut] Morf[ologii] Zhivot[nykh]. Trudy, 1961, v. 33, p. 151-172.

DESCRIPTORS: Growth, *Eye, Embryos, *Perch, *Fishes, Physiology, Morphology, Cells (Biology), Retina, Light.

Dobrova, N. B. and Drogaitsev, A. D.
CHANGES IN THE MECHANICAL PROPERTIES OF SYNTHETIC VASCULAR PROSTHESES. 10 Apr 63 [15]p. 6 refs. JPRS: 18644.
Order from OTS $0.50 63-21557

Trans. of Khirurgiya (USSR) 1963 [v. 39] no. 2, p. 137-141.

DESCRIPTORS: *Prosthetics, Artificial organs, *Blood vessels, Mechanical properties, Elasticity.

An investigation is made on the influence of the properties of the material and construction of the vascular prosthesis on the degree of alteration of its elasticity in the organism.

Dol'nik, V. P.
INBORN COMPONENTS OF THE INSTINCTIVE ACTIVITY OF BIRDS DURING THE NESTING PERIOD. [1962] [14]p. 6 refs.
Order from OTS or SLA $1.60 63-19039

Trans. of Leningrad U. Vestnik (USSR) 1960 [v. 15] no. 21, Ser[iya] Biol[ogii, no. 4] p. 101-112.

DESCRIPTORS: *Birds, Reproduction (Physiology), *Behavior, Eggs, Stimulation.

In the course of nest-building and egg-laying the thresholds of two innate reactions -- brooding and feeding -- are lowered simultaneously. By the end of egg-laying the bird is equally ready to act according to both reactions. The sequence of these reactions depends on the sequence in which the stimuli are formed. In most of the passerines the nest is three times as strong a stimulus of the brooding reaction as the eggs. The eggs are the principal stimulus of birds that build primitive nests. In the course of brooding, brooding itself be becomes a dominant. As the process of dominant formation is always accompanied by the process of generalization, brooding can be stimulated by an increasingly imperfect nest complex (empty nest, small balls or ellipsoids instead of eggs, etc.). The dominant is a

maximum at the moment of hatching. The sign stimulus of the innated feeding reaction is the nestling's open mouth. The feeding reaction likewise becomes a dominant. Thus, within six to seven days after hatching the adult bird is subjected to two dominants -- brooding and feeding. During this period the behavior of the nestlings effects the switching of the two dominants. (Author)

Flerov, B. A.
OLFACTION IN FISH: A SURVEY OF THE LITERATURE. 2 Apr 63 [19]p. 81 refs. JPRS: 18499.
Order from OTS $0.50 63-21480

Trans. of Voprosy Ikhtiologii (USSR) 1962, no. 3(24) p. 517-529.

DESCRIPTORS: *Fishes, *Sensory mechanisms, *Smell, Morphology, Food, Odors, Conditioned reflex, *Bibliographies.

The study of the role played by olfaction in a fish's life began with the clarification of whether a fish smells food. After it had been established that fish do have a sense of smell, a number of investigations were made which permitted the conclusion that for many species of fish odor is the deciding factor in the search for food. So far, attempts to isolate compounds which attract fish have not met with success. In the study of olfaction in the life of fish, an important role has been played by the method of conditioned reflexes. It has been established that some chemical substances are perceived in insignificant amounts by fish. The ability to distinguish between the odors of certain aquatic plants has been shown in Hyborhynchus notatus; in Phoxinus the ability to differentiate accurately the odor not only of specimens of other families, but also the smells of specimens from their own family. Repellents were found for some non-aggressive fish (Phoxinus, salmons). The Phoxinus were repelled by purino- and pterino-like substances isolated from their own skin; the salmons were frightened by α-serine, isolated from the skin of mammals. Recently begun investigations into the role of olfaction in the movement of fish show that the olfactory organ in salmons, eels and certain species of perch plays a decisive role in orientation. (Author)

Ishkov, A. A.
COMPLETE MECHANIZATION AND AUTOMATION IN THE FISH INDUSTRY: AN URGENT TASK. 18 Apr 63 [21]p. JPRS: 18771.
Order from OTS $0.50 63-21606

Trans. of Rybnoe Khozyaistvo (USSR) 1963 [v. 39] no. 2, p. 3-9.

DESCRIPTORS: *Fisheries, Industrial production, Automation, Management engineering, Industrial equipment.

Ivashin, M. V.
PERIODICITY OF HUMPBACK WHALE FEEDING IN THE SOUTH ATLANTIC OCEAN. 28 Mar 63 [10]p. 11 refs. JPRS: 18408.
Order from OTS $0.50 63-21443

Trans. of Moskovskoe Obshchestvo Ispytatelei Prirody. Byulleten' Otdel Biologicheskii (USSR) 1961, v. [36]66, no. 6, p. 110-115.

DESCRIPTORS: *Rhythm (Biology), *Cetacea, Marine biology, Aquatic animals, Atlantic Ocean, Food.

Lyakhov, S. M.
PROTECTING HYDRAULIC INSTALLATIONS FROM AN OVERGROWTH OF DREISSENA. 27 May 63, 6p. 6 refs. JPRS: 19425.
Order from OTS $0.50 63-21925

Trans. of Priroda (USSR) 1962, v. 51, no. 7, p. 106-108.

DESCRIPTORS: *Mollusca, *Hydraulic accumulators, *Hydroelectric power systems, *Fouling, Growth, Control, Molluscacides.

Makushok, M. E.
MATERIALS ON THE CHARACTERISTICS OF THE MURMAN HERRING (Materialy dlya Kharakteristiki Murmanskoi Sel'di). 1963, 43p. PL-480 Int.
Order from OTS $0.50 62-11019

Trans. of Zoologicheskii Zhurnal (USSR) 1928, v. 8, no. 3, p. 39-65; no. 4, p. 41-[88].

DESCRIPTORS: Morphology, Taxonomy, *Fishes, *Herring, Marine biology, Aquatic animals.

Mironova, N. V.
THE FEEDING AND GROWTH OF YOUNG GADOID FISHES IN THE COASTAL ZONE OF THE EASTERN NURMAN. 1961 [72]p. 121 refs. [DSIR] NLL M. 3922.
Order from OTS or SLA $7.60 63-15203

Trans. of mono. [Pitanie i Rost Molodi Treskovykh Ryb v Pribrezhnoi Zone Vostochnogo Murmana] Moscow/Leningrad, 1956 [98p.]

DESCRIPTORS: *Fishes, Feeding, Growth, Distribution, Size, Plankton, Food, Statistical data, Bibliographies.

This monograph is devoted to the biology of the young of the cod, pollack and haddock. The paper includes a summary of the information scattered throughout the literature of all countries, as well as many new facts on the feeding, rate of growth, entry into the bays, fluctuations in numbers and certain other features of the biology of young gadoids.

Stebaev, I. V.
THE ANIMAL POPULATION OF THE PRIMARY SOILS ON ROCKS AND ITS ROLE IN SOIL FORMATION. [1962] [21]p. 19 refs.
Order from OTS or SLA $2.60 63-19073

Trans. of Zoologicheskii Zhurnal (USSR) 1958, v. 37, no. 10, p. 1433-1448.

DESCRIPTORS: *Soils, *Soil mechanics, *Animals, Rock (Geology), Source, Chemical properties, Physical properties, Biology.

Zaitsev, V. P.
UNDERWATER FISHERY RESEARCH IN THE USSR. 2 Apr 63 [14]p. JPRS: 18501.
Order from OTS $0.50 63-21481

Trans. of Okeanologiya (USSR) 1962, v. 2, no. 6, p. 961-969.

DESCRIPTORS: *Fisheries, *Fishes, Scientific research, *Oceanology, Marine biology, Ocean currents, Diving, *Oceanographic equipment, Underwater illumination, *Underwater equipment, Submarines.

Zhadin, V. I.
THE PLACE OF HYDROBIOLOGY IN THE FULFILLMENT OF THE SEVEN-YEAR-PLAN (Mesto Gidrobiologii pri Vypolnenii Semiletnego Plana). 6 Mar 63, 26p. Trans. A-1389.
Order from OTS or SLA $2.60 63-15937

Trans. of Zoologicheskii Zhurnal (USSR) 1959, v. 38, no. 9, p. 1282-1291.

DESCRIPTORS: *Marine biology, *Economics, *Aquatic animals, Biological products, Dams, Food, Fishes, Water, Purification, Scientific research.

CHEMISTRY

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 47 (CHEMISTRY SERIES). 9 Jan 63 [10]p. JPRS: 17076.
Order from OTS or SLA $1.10 63-19544

Abstract trans. of Zeitschrift für Anorganische und Allgemeine Chemie (East Germany) 1962, v. 318, no. 5/6, p. 233-327.

DESCRIPTORS: *Abstracts, Bibliographies, *Chemistry, Photographic analysis, Synthesis (Chemistry), Halides, Chemical analysis, Physical chemistry, Catalysts, Organic compounds, Metallic compounds.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 173 (CHEMISTRY SERIES). 16 May 63, 12p. JPRS: 19211.
Order from OTS $0.50 63-21822

Consists of abstracts of articles from selected scientific and technical journals of Czechoslovakia.

DESCRIPTORS: *Abstracts, Bibliographies, *Chemistry, *Physical chemistry, *Biochemistry, *Chemical analysis, Minerals, Pharmacology, Radiochemistry.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 178 (CHEMISTRY SERIES). 22 May 63, 39p. JPRS: 19328.
Order from OTS $1.00 63-21883

Consists of abstracts of articles from selected scientific and technical journals of Hungary.

DESCRIPTORS: *Abstracts, Bibliographies, *Chemistry, *Radiochemistry, *Physical chemistry, *Conferences, Organic compounds, Biological products, Inorganic substances, Minerals, *Complex compounds, *Chemical analysis, *Electrochemistry, *Biochemistry, *Spectroscopy.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 181 (CHEMISTRY SERIES). 22 May 63, 21p. JPRS: 19349.
Order from OTS $0.75 63-21891

Abstract trans. of Acta Chimica (Hungary) 1963, v. 35, no. 2, p. 137-177, 179-211, 213-221, 223-243; no. 3, p. 245-263, 265-271, 273-299, 301-359, 361-375; no. 4, p. 377-379, 381-389, 391-405, 407-417, 419-445, 447-463, 465-480.

DESCRIPTORS: *Abstracts, Bibliographies, *Chemistry, *Physical chemistry, *Thermochemistry, *Electrochemistry, Biochemistry, Organic compounds, *Minerals, *Petroleum, Plastics, Drugs, Chemical engineering, Radiochemistry, Inorganic substances.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 186 (CHEMISTRY SERIES). 28 May 63, 11p. JPRS: 19438.
Order from OTS $0.50 63-21934

Consists of abstracts of articles from selected scientific and technical journals of East Germany and Poland.

DESCRIPTORS: *Abstracts, Bibliographies, *Chemistry, Pigments, Organic compounds, Metals, Solvents, Chemical analysis, Halides, Complex compounds, Physical chemistry, Fungicides, Chemical reactions, Chemical equilibrium.

Kerpel, R. G. van.
A STUDY OF THE COMPATIBILITY OF PLASTICIZERS. [1963] 33p.
Order from K-H $33.00 K-H 5309 i

Trans. of Ind[ustrie] Chim[ique] Belge, 1952, v. 17, p. 9-20.

DESCRIPTORS: *Plasticizers, Compatibility.

Saito, Shuji.
THE INTERACTION OF SYNTHETIC POLYMERS AND WETTING AGENTS. I. THE INTERACTION OF POLYELECTROLYTES AND WETTING AGENTS. II. COMPLEX FORMATION BETWEEN POLYMERS AND DETERGENT [Die Wechselwirkung Zwischen Synthetischen Polymeren und Netzmitteln. Teil I: Die Wechselwirkung Zwischen Polyelektrolyt und Netzmittel. Teil II: Komplexbildung Zwischen Polymeren und Detergent]. [1962] 21p. (figs. tables 39 refs. omitted).
Order from SLA $2.60 62-18250

Trans. of Kolloid Zeitschrift (West Germany) 1954 [v. 137, no. 2/3] p. 93-103.

DESCRIPTORS: *Electrolytes, *Polymers, Acrylic acids, Carboxymethylcellulose, Vinyl radicals, Sulfates, Ions, Polyvinyl alcohol, Acetates, Detergents, Adsorption, *Surface-active substances.

Sartori, Guido.
RECENT ADVANCES IN THE CHEMISTRY OF COMPLEXES. Paper presented at the National Congress of Chemistry (no. 9) held jointly with the Swiss Chemical Society, Naples, 27 May-2 June 62. [1963] 7200 words, 58 refs.
Order from CTS(Chem) $28.80 CTS(Chem)-333
subsequent copies $4.80/ea.

Trans. of Gazz[etta] Chim[ica] Ital[iana] 1962, v. 92, no. 9, p. 916-950.

DESCRIPTORS: *Complex compounds, Chemistry, *Chemical bonds, Theory, *Molecular structure, *Stereochemistry, *Reaction kinetics, Stability, Synthesis.

Signer, R. and Studer, M.
THE SEPARATION OF A MIXTURE OF CRUDE THEVETIN INTO ITS COMPONENTS, CERBEROSIDE AND THEVETIN A, BY MEANS OF A NEW APPARATUS FOR MULTISTAGE PARTITION BETWEEN TWO LIQUID PHASES. [1963] 5p.
Order from ATS $7.50 ATS-10Q68G

Trans. of Helv[etica] Chim[ica] Acta (Switzerland) 1960, v. 43, p. 1427-1431.

DESCRIPTORS: *Drugs, Laboratory equipment, *Material separation, Liquids.

Sulikowski, J.
A WET PROCESS WITHOUT WATER. [1963] 4p.
Order from ATS $6.25 ATS-87Q68P

Trans. of Cement, Wapno, Gips (Poland) 1953, v. 9, no. 5/6, p. 97-98.

DESCRIPTORS: *Surface-active substances, Cements.

Sultanov, M. Yu. and Belen'kii, M. S.
INFLUENCE OF THE COMPOSITION ON THE PROPERTIES OF COPPER OXIDE-CHROMIUM OXIDE CATALYSTS IN THE REACTION OF THE COMPLETE OXIDATION OF n-HEPTANE. [1963] 7p.
Order from ATS $8.50 ATS-12Q69R

Trans. of Izv[estiya] Vysshikh Uchebn[ykh] Zavedenii. Neft i Gaz (USSR) 1962, v. 5, no. 12, p. 59-64.

DESCRIPTORS: *Copper compounds, *Chromium compounds, Oxides, *Catalysts, Chemical reactions, *Oxidation, *Heptanes, Chemical properties.

Analytical Chemistry

Flood, H. and Bruun, B.
THE TITRATION ERRORS IN THE POTENTIOMETRIC QUANTITATIVE DETERMINATION OF BROMIDE AND CHLORIDE IN MIXTURES. [1963] 14p. 10 refs.
Order from SLA $1.60 63-10987

Trans. of Z[eitschrift für] Anorg[anische und] Allgem[eine] Chem[ie] (Germany) 1936, v. 229, p. 85-86.

DESCRIPTORS: *Silver compounds, *Bromides, *Chlorides, Mixtures, Quantitative analysis, *Electrolytic titration, Errors.

Honegger, C. G.
PREPARATORY THIN LAYER CHROMATOGRAPHY (Präparative Dünnschichtchromatographie). [Nov 62] [10]p. 10 refs.
Order from SLA $1.10 63-10927

Trans. of Helvet[ica] Chim[ica] Acta (Switzerland) 1962, v. 45, no. 5, p. 1409-1415.

DESCRIPTORS: *Chromatographic analysis, Adsorbants, *Gels, Thin films, Preparation, *Dyes, Separation, Organic solvents.

The preparation of 1-5 mm. thick layers of adsorbent for preparative thin layer chromatography is described. The conditions of separation on Kieselgel G in relation to layer thickness, shape of spots and loading capacity have been examined. Optimum conditions have been found in layer thicknesses of 1-3 mm., whereby the loading capacity of Kieselgel G per substance lies at approximately 5-25 mg/mm. layer thickness for a 20 x 20 cm. plate. The application for the preparative separation of dye mixtures by means of ascending chromatography and horizontal overflow chromatography is described. (Author)

Jurecek, Miroslav.
SOME ANALYTICAL ASPECTS OF THE OXIDATION OF ORGANIC NITROGEN COMPOUNDS WITH CHROMIC ACID. 25 Oct 62, 17p. 52 refs.
Order from SLA $1.60 63-10584

Trans. of Mikrochimica Acta (Austria) 1962, no. 5, p. 926-938.

DESCRIPTORS: Organic compounds, Chemical analysis, *Nitrogen compounds, *Nitro radicals, *Nitroso radicals, *Amines, Oxidation, *Chromic acid, Carbon Dioxide, Water, Ammonia, Nitrogen.

The oxidation of organic nitrogen compounds was investigated systematically. It was established that carbon and hydrogen under certain conditions are oxidized to carbon dioxide and water, while nitrogen, depending on the type of bonding, is converted into various products. The nitro and nitroso groups yield nitric acid; the primary and secondary aromatically-bound amino groups change to ammonia, and two nitrogen atoms bound to each other become free as elemental nitrogen. These findings serve as the basis for developing new methods for the selective determination of the nitrogen forms cited, or for their simultaneous determination from a single sample. (Author)

Körbl, J.
DETERMINATION OF CARBON AND HYDROGEN IN ORGANIC COMPOUNDS. Pt. 2 of Analytical Applications of Silver Permanganate. 23 July 62 [12]p. 22 refs.
Order from SLA $1.60 62-18985

Trans. of [Sbornik Chekhoslovatskykh Khimicheskykh Rabot] 1955, v. 20, p. 953-960.

DESCRIPTORS: Chemical analysis, Determination, *Carbon, *Hydrogen, Organic compounds, Pyrolysis, *Silver compounds, *Permanganates, Catalysts, Absorption, Nitrogen, Dioxides, Halogens, Sulfur.

The thermal decomposition product of silver permanganate is used as a combustion catalyst in the determination of carbon and hydrogen in organic compounds. The filling also fixes halogens and sulfur dioxide. The catalytic combustion, which proceeds at relatively low temperature, is rapid and complete, so that the time required for a semimicroanalysis can be reduced to one hour. The silver permanganate decomposition product was also used for the absorption of nitrogen dioxide between the hydrogen and carbon absorption tubes. (Author)

Körbl, J.
DETERMINATION OF CARBON AND HYDROGEN USING A SHORT CATALYTIC FILLING IN THE COMBUSTION TUBE. Pt. 3 of Analytical Applications of Silver Permanganate. 30 July 62 [11]p. 12 refs.
Order from SLA $1.60 62-18987

Trans. of [Sbornik Chekhoslovatskykh Khimicheskykh Rabot] 1955, v. 20, p. 1026-1031.

DESCRIPTORS: Chemical analysis, Combustion chambers, Determination, *Carbon, *Hydrogen, *Silver compounds, *Pyrolysis, *Permanganates, Reaction kinetics, *Catalysts.

The semimicrodetermination of carbon and hydrogen, using a 3.5 cm contact layer, is described. (Author)

Körbl, J.
PROPERTIES OF SILVER PERMANGANATE AND ITS THERMAL DECOMPOSITION PRODUCT. Pt. 1 of Analytical Applications of Silver Permanganate.
19 July 62 [7]p. 18 refs.
Order from SLA $1.10 62-18984

Trans. of [Sbornik Chekhoslovatskykh Khimicheskykh Rabot] 1955, v. 20, p. 948-951.

DESCRIPTORS: Chemical analysis, *Permanganates, *Silver compounds, Decomposition, *Pyrolysis, Oxidation, Oxygen, Hydrogen, Catalysis.

The oxidation properties of solid silver permanganate and the oxidation-catalytic properties and absorptivity of its thermal decomposition product were studied with a view to their analytical application. (Author)

Körbl, J. and Pribil, R.
A SIMPLE AND RAPID METHOD FOR DETECTING ELEMENTS IN ORGANIC COMPOUNDS. Pt. 6 of Analytical Applications of Silver Permanganate.
16 Aug 62 [9]p. 21 refs.
Order from SLA $1.10 62-18990

Trans. of [Sbornik Chekhoslovatskykh Khimicheskykh Rabot] 1956, v. 21, p. 955-959.

DESCRIPTORS: Chemical analysis, *Chemical elements, Detection, *Microanalysis, Carbon, *Inorganic substances, Pyrolysis, *Organic compounds, Permanganates, Silver compounds, Reaction kinetics,

A simple micro method has been developed for the detection of carbon, hydrogen, mercury, nitrogen, chlorine, bromine, iodine, sulfur, phosphorus, and arsenic in organic materials. A 0.1-1 mg sample, mixed with the decomposition product of $AgMnO_4$, is oxidized by gentle warming. Hydrogen is detected by the formation of dew in the reaction tube. Carbon is detected by reaction with barium hydroxide. Mercury forms a coating on the tube wall, in which it is detected with dithizone. Halogens, sulfur, phosphorus, arsenic, and part of the nitrogen are retained in the reaction mass mainly as silver salts and are brought into solution by stepwise extraction with water, ammonia, and silver nitrate, and then detected. The decomposition of the material and the washing out take place in a tube adapted for this purpose, so that filtration is unnecessary. All detections can be performed within a few minutes. (Author)

Kowalski, Zygmunt.
A SPECIFIC MODIFICATION IN OBTAINING A HANGING MERCURY ELECTRODE. [1962] 4p.
10 refs.
Order from SLA $1.10 63-10242

Trans. of Roczniki Chemii (Poland) 1961, v. 35, p. 365-367.

DESCRIPTORS: *Mercury electrodes, *Polarographic analysis, *Laboratory equipment.

Mazitova, F. N., Virobyants, R. A., and Ermakova, S. K.
ANALYSIS OF LIGHT HYDROCARBONS FROM PETROLEUM BY MEANS OF GAS-LIQUID CHROMATOGRAPHY. [1963] 6p.
Order from ATS $7.50 ATS-25Q69R

Akad[emiya] Nauk SSSR. Otdel[enie] Khim[icheskikh] Nauk. Izvest[iya] 1962, no. 9, p. 1546-1550.

DESCRIPTORS: *Hydrocarbons, Petroleum, Gases, Liquids, *Chromatographic analysis.

Mikhailov, M. K.
WILKINSON'S, PHILLIP'S AND BACOT'S METHOD FOR DETERMINING CHLOROGENIC ACID IN TOBACCO. [1962] 6p. 14 refs.
Order from SLA $1.10 62-18834

Trans. of Bulgar[ska] Akad[emiya na] Nauk[ite]. Dokl[ady] [1959] v. 12, no. 6, p. 525-528.
Another trans. is available from K-H $7.50 as K-H 10833-a [1962].

DESCRIPTORS: Chemical analysis, *Tobacco, *Chlorogenic acids, Phenols, Precipitation.

Misson, G.
COLORIMETRIC DETERMINATION OF PHOSPHORUS IN STEEL. [1963] 3p. 1 ref.
Order from SLA $1.10 63-14590

Trans. of Chem[iker] Z[ei]t[un]g (Germany) 1908, v. 32, p. 633.

DESCRIPTORS: *Steel, *Phosphorus, Colorimetric analysis.

Mokhov, L. A. and Khalturin, V. S.
RAPID METHOD FOR THE DETERMINATION OF NITROGEN OXIDES IN THE AIR. [1963] 3p.
Order from ATS $5.00 ATS-48Q69R

Trans. of Laboratornoe Delo (USSR) 1958, v. 4, no. 2, p. 26-27.
Another trans. is available from OTS $4.00 in 60-21475, May 60 [270]p.

DESCRIPTORS: Chemical analysis, Determination, *Nitrogen compounds, *Oxides, *Air.

Peshkov, V. M., Fromov, M. I. and others.
TITRAGE SPECTROPHOTOMETRIQUE DES TERRES RARES [Spectrophotometric Titration of Rare Earths] tr. by de Trezvinsky. 20 Apr 62 [13]p. 6 refs.
CEA Trans. no. R 1644.
Order from OTS or SLA $1.60 63-15468

Trans. in French of Moscow U. Vest[nik]. Ser[iya 2]: Khim[iya] (USSR) 1961 [v. 16] no. 4, p. 59-63.

DESCRIPTORS: *Titration, Spectrophotometers, *Rare earth elements, Chemical indicators.

Polgar-Bakacs, Elizabeth.
RAPID TITRIMETRIC DETERMINATION OF SULFATE IONS WITH Ba CHLORIDE AS A MEASURING SOLUTION. 6 Apr 62, 8p. 11 refs.
Order from SLA $1.10 63-10816

Trans. of Magyar Kemiai Folyoirat (Hungary) 1955, v. 61, no. 2, p. 48-50.

DESCRIPTORS: Titration, *Volumetric analysis, *Sulfates, *Barium compounds, Chlorides, Chemical indicators, Ions.

A procedure for the rapid volumetric determination of sulfate ions was developed. The determination was made in alcoholic medium at pH 10 with 0.01 M Ba chloride measuring solution. Magnesium ions masked with complexon III and Eriochromeschwarz T were used as indicators. At the equivalence point the barium ions displace the magnesium ions from the magnesium complexonate, causing the blue color of the Eriochromeschwarz T to turn wine-red. The process can be performed with or without carbon tetrachloride. By shaking the solution with carbon tetrachloride during titration, the barium sulfate precipitate reaches the lower carbon tetrachloride phase, and the color of the transparent solution ring above the white precipitate layer can be seen distinctly. (Author)

Sommer, P. F., Sauter, W. and others.
A SELF-INTEGRATING METHOD FOR THE RAPID DETERMINATION OF CARBON AND HYDROGEN IN ORGANIC COMPOUNDS ON MILLIGRAM AND SUB-MILLIGRAM SAMPLES USING CATHAROMETERS (PRELIMINARY REPORT) (Selbstintegrierende Methode zur Raschen Bestimmung von Kohlenstoff und Wasserstoff in Organischen Verbindungen an Milligramm-und Submilligram-Mengen unter Verwendung von Katharometern). [1962]7p. (figs. omitted) 25 refs.
Order from SLA $1.10 63-10399

Trans. of Helv[etica] Chim[ica] (Switzerland) 1962, [v. 45] no. 2, p. 595-600.

DESCRIPTORS: *Quantitative analysis, *Carbon, *Hydrogen, Organic compounds, Microanalysis, Thermal conductivity, Combustion.

The linear relation between the measured signals and the amount of carbon and hydrogen introduced into the combustion tube is illustrated. The time stability of the apparatus constants is indicated by the fact that the three points reveal no significant deviation from the linear regression, although they correspond to results obtained about three weeks after the other values. An idea of the size of the samples employed, the universality of the method, and the accuracy of the measurements can be obtained from the tabulated summary. At this point a detailed discussion of the errors would be premature. However, there is no doubt that once certain isolated sources of disturbance have been eliminated, the conditions stated will be fully satisfied. The time required for a single measurement is largely determined by the duration of combustion. A complete analysis can be carried out comfortably in 7 minutes. (Author)

Suvorovskaya, N. A.
DETERMINATION OF IRON IN ALUMINATE SOLUTIONS BY A POLAROGRAPHIC METHOD, tr. by Ingeborg V. Baker and George N. Kasachkoff. 4 Jan 63, 6p. 6 refs. [AMC] (Redstone) Trans-no. 1-63.
Order from OTS or SLA $1.10 63-15134

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1944, v. 17, no. 3, p. 156-158.

DESCRIPTORS: *Aluminates, Solutions, *Iron, *Polarographic analysis, Iron compounds, Sulfides, Complex compounds.

This work demonstrates the practicability of using the polarographic method of analysis for determination of iron in aluminate solutions. The iron is precipitated in the form of sulfide, dissolved in hydrochloric acid, and reduced by sulfur dioxide during boiling of the solution with sodium sulfide. Tartaric acid is added for retention of the iron as a complex within the solution. Twenty milliliters of a solution containing 200 milliliters of NH_4OH and 100 grams of $(NH_4)_2CO_3$ per liter is used as a regulating solution. (Author)

Szekeres, Leslie and Polgar-Bakacs, Elizabeth.
VOLUMETRIC DETERMINATION OF SULFATE IONS. 3 May 62 [9]p. 9 refs.
Order from SLA $1.10 63-10795

Trans. of Magyar Kemiai Folyoirat (Hungary) 1955, v. 61, no. 10, p. 298-300.

DESCRIPTORS: *Volumetric analysis, *Sulfates, Hydroxides, Chemical indicators, Barium compounds, Chlorides, Ions.

The sulfate ion content of alkali sulfate solutions was determined by the following method: A known amount of Na_2CO_3 solution, and phenolphthalein indicator are added to the neutral solution, then as much alcohol as is needed to obtain an alcohol concentration of about 25-30%, and the SO_4^{2-} and CO_3^{2-} ions were titrated together, with $BaCl_2$ solution. The disappearance of the

Yampol'skii, M. Z.
PHOTOMETRIC DETERMINATION OF TRACES OF INDIUM. I. DETERMINATION OF INDIUM IN PRESENCE OF ALUMINIUM, IRON, ZINC, AND CADMIUM WITH THE AID OF STILBAZO REAGENT (Fotometricheskoe Opredelenie Sledov Indiya. I. Opredelenie Indiya v Prisutstvii Alyuminiya, Zheleza, Tsinka, i Kadmiya pro Pomoshchi Reagenta Stil'bazo). Apr 63 [14]p. 11 refs. RTS-2215.
Order from OTS or SLA $1.60 63-19131

Trans. of Akad[emiya] Nauk SSSR. Komissiya [po] Anal[iticheskoi] Khim[ii]. Trudy, 1960, v. 11[14] p. 261-272.

DESCRIPTORS: *Indium, *Indium compounds, Photometers, Chemical analysis, Aluminum compounds, Iron compounds, Zinc compounds, Cadmium compounds, Ammonium compounds, Chemical indicators, Stilbenes, Hydroxides, Benzenes, Sulfonic acids.

CO_3^{2-} ions is indicated by the decoloration of the indicator. The SO_4^{2-} ions are converted to insoluble Ba salts more rapidly than the CO_3^{2-} ions. When more dilute solutions are titrated, a small amount of ethyl ether is added to the solution to be titrated. (Author)

Inorganic Chemistry

[INORGANIC CHEMISTRY]. 12 Aug 49, 6p. (fig. omitted) 12 refs.
Order from OTS or SLA $1.10 63-14281

Trans. from mono. FIAT Review of German Science 1939-46, Inorganic Chemistry, pt V. [1948] (PB-85042).

DESCRIPTORS: *Chemistry, *Inorganic compounds, Halides, Oxides, Sulfides, Aluminum, Electrolysis, Gases, Solubility, Metals, Thermodynamics, Chemical reactions, Reaction kinetics.

Contents:
Halides
Oxides and Sulfides
Aluminum electrolysis
Other equilibria of metallurgical significance

Balarew, D.
THE MUTUAL TRANSITION OF THE ORTHO-, PYRO-, AND METAPHOSPHORIC ACIDS INTO ONE ANOTHER ON HEATING. [1962] 9p. 2 refs.
Order from SLA $1.10 63-10484

Trans. of Zeitschr[ift] für Anorg[anische] Chemie (Germany) 1910, v. 67, p. 234-241.

DESCRIPTORS: *Phosphoric acids, Transformations, Heating, Vapor pressure.

It was found: (1) that in increasing the water-vapor tension over heated orthophosphoric acid the temperature of formation of the pyro- acid rises faster than that of the meta- acid. (2) On account of the volatility of the meta- acid the investigation could be carried only to a relatively low temperature so that the anticipated meeting of the curves of temperature formation for pyro- and meta- acid, that is, the direct transition of ortho- into meta- acid, could not be reached. (Author)

Damianovich, Horacio.
CHEMICAL INERTIA OF THE RARE GASES. I. ACTION OF HELIUM ON PLATINUM. 15 Mar 61, 34p. 7 refs.
Order from SLA $3.60 63-10392

Trans. of [Asociacion] Quimica Argentina. Anales, 1929, v. 17, p. 95-141.

DESCRIPTORS: *Helium group gases, *Helium, *Platinum compounds, Synthesis, Temperature, Chemical properties, Microstructure, Reaction kinetics, Electrochemistry.

Damianovich, Horacio.
INERTIA AND CHEMICAL ACTIVITY OF THE RARE GASES. 17 Jan 61, 10p.
Order from SLA $1.10 63-10366

Trans. of [Universidad Nacional del Litoral]. Inst[ituto de] Invest[igaciones] Cient[ificas y] Tecn[ologicas]. Anales (Argentina) 1932, v. 1, p. 30-37.

DESCRIPTORS: *Helium group gases, *Helium, *Platinum compounds, Synthesis, Chemical properties, Chemical analysis, Electrochemistry.

The author gives a description of the experimental technique by means of which he has obtained the Platinum-Helium combination mixed with an excess of the metal, in sufficient amount to study its decomposition

and some of its properties. It consists of producing the electric discharge, using the platinum as electrode, in the presence of helium at low pressure. The product is decomposed by heat, leaving metallic platinum with its customary properties, and dissolves in dilute aqua regia more readily than the platinum derived from its decomposition and more readily than do the products obtained under similar conditions with oxygen, nitrogen, and hydrogen. Measurement was made of the amount of helium combined with the platinum. In the two determinations made with two different preparations, the same relation was obtained between the platinum dissolved in dilute aqua regia and the total amount of helium. A very distinct difference was determined between the characteristics of the phenomenon and the products formed by each one of the gases mentioned. The necessary investigations were pursued to find out in which categories of combinations it is possible to place the products obtained and whether it is possible to isolate them from the excess of metal which they contain. (Author)

Damianovich, Horacio.
[INERTIA] AND CHEMICAL ACTIVITY OF THE RARE GASES. VIII. THE ACTION OF HELIUM ON PALLADIUM UNDER THE INFLUENCE OF ELECTRIC DISCHARGES. 15 Sep 60, 6p. 3 refs.
Order from SLA $1.10 63-10344

Trans. of Soc[iedad] Cient[ifica] Argentina. Anales, 1935, v. 120, p. 98-103.

DESCRIPTORS: *Helium group gases, *Helium, *Palladium compounds, Synthesis, Chemical properties, Stability, Electrochemistry, Electric discharges.

By the action of helium activated by electrical charges at low pressure on palladium volatilized cathodically, is obtained a product with a strong proportion of helium, very stable and with properties distinct from those of the palladium obtained under equal conditions in the presence of hydrogen. The product is more stable than the platinum-helium compounds, since the decomposition temperature is more than 300 degrees. It can be concluded with great probability that one is dealing here with one or more definite chemical combinations between palladium and helium. In this case, as in that of platinum, helium manifests an evident chemical activity under the experimental conditions employed. (Author) (See also 63-10133)

Damianovich, Horacio.
INERTIA AND CHEMICAL ACTIVITY OF THE RARE GASES. XV. ELECTRICAL RESISTANCE AND OPTICAL PROPERTIES OF THE CATHODIC FILMS OF HELIUM-PLATINUM COMPOUNDS. 20 Oct 61, 9p. 7 refs.
Order from SLA $1.10 63-10133

Trans. of [Universidad Nacional del Litoral]. Inst[ituto de] Invest[igaciones] Cient[ificas y] Tecn[ologicas] Anales (Argentina) 1937, v. 7, p. 10-16.

DESCRIPTORS: *Helium group gases, *Helium, *Platinum compounds, Resistance (Electrical), Optical properties, Cathodes, Films.

Results obtained show that platinum activated cathodically in the presence of helium undergoes great changes in its electrical resistance and in its optical density--a fact which is more in accord with previous conclusions relative to the formation of chemical compounds between the elements than with the hypothesis of physical actions of the type of simple condensations or absorptions, which produce no fundamental changes. (Author) (See also 63-10118)

Damianovich, Horacio.
INERTIA AND CHEMICAL ACTIVITY OF THE RARE GASES: RELEASE OF HELIUM BY THE PLATINUM-HELIUM COMPOUND AND BY RADIUM SALTS AT DIFFERENT TEMPERATURES. 14 Aug 61, 17p. 3 refs.
Order from SLA $1.60 63-10342

Trans. of Soc[iedad] Cient[ifica] Argentina. Anales, 1934, v. 118, p. 227-241.

DESCRIPTORS: *Helium group gases, *Helium, *Platinum compounds, *Radium compounds, Bromides, Pyrolysis.

Damianovich, H[oracio].
THE INERTIA AND THE CHEMICAL ACTIVITY OF THE RARE GASES. I. THE THEORY OF NULLIVALENCE: THE GENERAL PROBLEM OF THE CHEMICAL ACTIVATION OF THE RARE GASES. [1962] 8p. 25 refs.
Order from SLA $1.10 63-10522

Trans. of Soc[iété] Chim[ique de] France. Bull[etin] [1938] ser. 5, v. 5, p. 1085-1091.

DESCRIPTORS: *Helium group gases, Chemical compounds, Valence, Theory.

Damianovich, Horacio and Berraz, Guillermo.
ACTION OF NITROGEN ON PLATINUM UNDER THE INFLUENCE OF ELECTRIC DISCHARGES AT LOW PRESSURE. 4 Jan 62, 8p. 1 ref.
Order from SLA $1.10 63-10137

Trans. of [Universidad Nacional del Litoral]. Inst[ituto de] Invest[igaciones] Cient[ificas y] Tecn[ologicas]. Anales (Argentina) 1932, v. 1, p. 58-63.

DESCRIPTORS: *Nitrogen compounds, *Platinum compounds, Synthesis, Stability, Chemical properties, *Electric discharges.

The authors, employing a technique similar to that utilized with helium, have succeeded in combining nitrogen with platinum under the influence of electric discharges at low pressure. The product is relatively stable and its properties (particularly the density and the action of dilute aqua regia) are very different from those of ordinary platinum and from those of the products obtained with helium, oxygen, and hydrogen. (Author)

Damianovich, H[oracio] and Berraz, G[uillermo].
THE CHEMISTRY OF HELIUM AND OF ANALOGOUS ELEMENTS. VI. FIXATION OF ARGON BY IRON UNDER THE INFLUENCE OF ELECTRIC DISCHARGES. 18 May 61, 3p. 3 refs.
Order from SLA $1.10 63-10368

Trans. of [Universidad Nacional del Litoral]. Inst[ituto de] Invest[igaciones] Cient[ificas y] Tecn[ologicas]. Anales (Argentina) 1937, v. 7, p. 34ff.

DESCRIPTORS: *Helium group gases, *Argon, *Iron compounds, Synthesis, Chemical properties, Electrochemistry.

Verification was made of the fixation of argon by iron volatilized cathodically. The behavior of the product, submitted to heating seems to indicate the formation of a compound between these two elements. (Author)

Damianovich, Horacio and Christer, C.
INERTIA AND CHEMICAL ACTIVITY OF THE RARE GASES. XIV. CATHODIC FIXATION OF HELIUM BY BISMUTH AND THE PROPERTIES OF THE COMPOUND. 4 Nov 60, 3p.
Order from SLA $1.10 63-10118

Trans. of Revista Brasileira de Quimica, 1938, v. 6, p. 72-73.

DESCRIPTORS: *Helium group gases, *Helium, *Bismuth compounds, Synthesis, Chemical properties, Electrochemistry, Cathodes.

Helium and bismuth, activated cathodically, give a compound or complex with general properties distinct from those of its components and with relative stability. (Author) (See also 63-10344)

Damianovich, Horacio and Christen, Carlos.
ACTION OF HYDROGEN ON PLATINUM UNDER THE INFLUENCE OF ELECTRIC DISCHARGES AT LOW PRESSURE. 19 Dec 61 [5]p.
Order from SLA $1.10 63-10138

Trans. of [Universidad Nacional del Litoral]. Inst[ituto de] Invest[igaciones] Cient[ificas y] Tecn[ologicas]. Anales (Argentina) 1932, v. 1, p. 54-57.

DESCRIPTORS: *Hydrogen compounds, *Platinum compounds, Synthesis, *Electric discharges.

The authors, employing a technique similar to that used with helium, have obtained a product very much like finely-divided platinum. Under these conditions the combination of hydrogen with platinum is inconsiderable or nil. (Author)

Damianovich, H[oracio] and Piazza, J.
THE CHEMISTRY OF HELIUM AND ANALOGOUS ELEMENTS: THERMAL DECOMPOSITION OF HELIUM-PLATINUM COMPOUNDS AT HIGH PRESSURES IN A HELIUM ATMOSPHERE. 10 July 61 [8]p. 1 ref.
Order from SLA $1.10 63-10388

Trans. of Soc[iedad] Cient[ifica] Argentina. Anales, 1937, v. 124, p. 234-240.

DESCRIPTORS: *Helium group gases, *Helium, *Platinum compounds, Pyrolysis, High pressure research, Atmosphere.

Pressures up to 42 atmospheres do not provoke in the platinum-helium compound (whose decomposition temperature is 90 - 100°), during isothermic decomposition at 110°, appreciable variations in the general thermal behavior. Neither was there observed a reversibility of the process at these pressures and at the indicated temperature. Helium and platinum, submitted to a pressure of 42 atmospheres at a temperature of 110°, do not combine, as is the result in the cathodic activation of the two elements. (Author)

Damianovich, Horacio and Piazza, Jose.
ACTION OF OXYGEN ON PLATINUM UNDER THE INFLUENCE OF ELECTRIC DISCHARGES AT LOW PRESSURE. 29 Dec 61 [6]p.
Order from SLA $1.10 63-10134

Trans. of [Universidad Nacional del Litoral]. Inst[ituto de] Invest[igaciones] Cient[ificas y] Tecn[ologicas]. Anales (Argentina) 1932, v. 1, p. 49-53.

DESCRIPTORS: *Oxygen compounds, *Platinum compounds, Oxides, Synthesis, Adsorption, *Electric discharges.

Employing a discharge technique similar to that used in the action of helium on platinum, the authors have succeeded in combining oxygen with platinum under the influence of discharges at low pressure. The product obtained seems to be an oxide having the relation P_2O_3. It is very stable at ordinary temperature and decomposes under strong heating. Its density is much less than that of ordinary platinum and that of platinum-helium. Its ability to adsorb air is nil, contrary to what was observed with platinum-helium and platinum-nitrogen. (Author)

Damianovich, H[oracio] and Virasoro, E.
THE CHEMISTRY OF HELIUM AND ANALOGOUS ELEMENTS. VII. HELIUM IN THE COMPOUNDS He-Pt AND He-Pt-Hg, AND CHANGES IN THE MICROCRYSTALLINE STRUCTURE AS REVEALED BY X-RAY SPECTROGRAMS. 22 May 61 [6]p. 1 ref.
Order from SLA $1.10 63-10369

Trans. of [Universidad Nacional del Litoral]. Inst[ituto de] Invest[i]g[acio]n[e]s Cient[ificas y] Tecn[ologicas]. Anales (Argentina) 1937, v. 7, p. 37-38.

DESCRIPTORS: *Helium group gases, *Helium, *Platinum compounds, *Mercury compounds, Crystal structure, X-ray spectroscopy.

HePtHg complexes have very definitely been successfully prepared by causing 50-percent HNO_3 to react on the microcrystalline amalgams obtained by heating the HePtHg at temperatures between 130 and 150° and at concentrations corresponding to 1 to 2.5 percent of platinum. (Author) (See also 63-10368)

Glemser, Oskar and Sauer, Hubert.
TUNGSTEN OXIDES. 12 July 58, 14p. (figs. tables omitted) 26 refs.
Order from SLA $1.60 63-10589

Trans. of Zeitschrift für Anorganische Chemie (Germany) [1943] v. 252, p. 144-159.

DESCRIPTORS: *Tungsten compounds, Oxides, Synthesis, Phase studies, Chemical reactions.

Hantsch, A. and Berger, K.
NITROSYL PERCHLORATE AND NITROSYL SURFACE, ALSO THEIR COLORED REDUCTION PRODUCTS.
14 June 60, 16p. 24 refs.
Order from SLA $1.60 63-10592

Trans. of Z[eitschrift für] Anorg[anische] Chem[ie] (Germany) 1930, v. 190, p. 321-336.

DESCRIPTORS: *Nitrogen compounds, *Perchlorates, *Sulfates, Chemical properties, Molecular structure, Reduction (Chemistry), Colors.

Jander, Gerhart and Wendt, Hildegard.
FUNDAMENTALS OF A CHEMISTRY IN ABSOLUTE NITRIC ACID. II. SOLVOLYSIS REACTIONS AND AMPHOTERIC PHENOMENA. 15 Dec 61, 23p. 18 refs.
Order from SLA $2.60 63-10560

Trans. of Z[eitschrift für] Anorg[anische] Chem[ie] (East Germany) 1949, v. 258, p. 1-14.

DESCRIPTORS: *Nitric acid, *Solvent action, Cadmium compounds, Zinc compounds, Acetates, Potassium compounds, Lead compounds, Nitro radicals, Phenols, Silicon compounds, Chlorides, Phosphorus compounds, Oxychlorides, Uranyl radicals, Nitrates, Perchlorates.

It is shown that solvolysis reactions take place in absolute nitric acid also, just as they do in other anhydrous but "waterlike" solvents; and indeed the type of solvolysis reaction in nitric acid is predominantly the same as that in anhydrous, liquefied hydrogen fluoride. Uranyl nitrate, "amphoteric" in absolute nitric acid, reacts with, among others, the basic analog tetramethylammonium nitrate to form tetramethylammoniumuranyl nitrate. Likewise, uranyl nitrate enters into reaction with the strongly acid-analogous perchloric acid to form the extremely hygroscopic uranyl perchlorate. Investigation of cadmium nitrate showed that the amphoteric properties in absolute nitric acid are less pronounced than with uranyl nitrate. (Author) (See also 63-10559)

Kremnev, L. Ya., Mischchenko, K. P., and Feklinov, A. I.
EMULSIONS OF METALLIC MAGNESIUM IN THE MELTS OF VARIOUS SALTS. [1963] 16p.
Order from K-H $16.00 K-H 6065 a

Trans. of [Zhurnal Prikladnoi Khimii] (USSR) 1946, v. 19, no. 4, p. 363-370.

DESCRIPTORS: *Magnesium, Liquid metals, *Salts, Melting, *Colloids.

Kröger, C. and Behr, W.
PEROXIDE FORMATION IN POTASH LYE (KOH).
16 June 60, 5p. (figs. omitted) 10 refs.
Order from SLA $1.10 63-10566

Trans. of Z[eitschrift für] Anorg[anische] Chem[ie] (East Germany) 1945, v. 253, p. 92-94.

DESCRIPTORS: *Peroxides, Oxidation, Hydroxides, *Potassium compounds.

The peroxide compound resulting from the action of oxygen on potassium hydroxide is formed according to $2\,KOH + 1/2\,O_2 = K_2O_2 + H_2O$. The reaction was investigated along with the simultaneous formation of water; it begins at about 210° and attains a maximum with about 20 percent conversion at 470°.

Mayer, Aldo.
PREPARATION OF ALLOYS BY THE ACTION OF METALS ON FUSED SALTS, NOTE II. [1963] 9p.
Order from K-H $9.00 K-H 3737 c

Trans. of Annali di Chimica (Italy) 1954, v. 44, p. 299-304.

DESCRIPTORS: *Alloys, *Metals, Salts, *Fused materials, Preparation.

Samsonov, G. V. and Lyutaya, M. D.
PREPARATION OF CERIUM NITRIDE. 26 Apr 63, 6p. 11 refs. JPRS: 18919.
Order from OTS $0.50 63-21689

Trans. of #Zhurnal Prikladnoi Khimii (USSR) 1962, v. 35, no. 11, p. 2359-2362.

DESCRIPTORS: *Cerium compounds, *Nitrites, Synthesis (Chemistry), Nitrogen, Ammonia.

Wiberg, Egon and Hartwimmer, Robert.
ALKALINE EARTH BOROHYDRIDES, $M(BH_4)_2$. III. SYNTHESIS FROM ALKALINE EARTH HYDRIDES AND DIBORANE. 7 May 59, 3p. 3 refs.
Order from SLA $1.10 63-10606

Trans. of Z[eitschrift für] Naturforsch[ung] (West Germany) 1955, v. 10b, p. 295-296.

DESCRIPTORS: *Alkaline earth compounds, *Complex compounds, *Calcium compounds, *Strontium compounds, *Barium compounds, *Borohydrides, Synthesis, *Hydrides, *Diboranes, Reagents, Furan, Ethers.

The hydrides of calcium, strontium, and barium are converted into borohydrides in boiling tetrahydrofuran upon introduction of diborane:

$$MH_2 + (BH_3)_2 \longrightarrow M(BH_4)_2.$$

With the use of ether instead of THF this reaction does not occur. (Author)

Organic Chemistry

PLASTICIZERS. [1962] 13p.
Order from OTS or SLA $1.60 63-10814

Trans. of Belgian patent 600,143, by Farbwerke Hoechst Aktiengesellschaft (priority of appl. filled in Germany, 11 Feb 60, F 30,519 IVb/12qu).

DESCRIPTORS: *Plasticizers, Production.

This patent concerns quaternary compounds and their preparation.

Bunge, Wilhelm; Bayer, Otto, and Motschmann, Oskar.
METHOD FOR PREPARATION OF POLYISOCYANATES, tr. by J. R.-P. 4 Oct 62, 5p.
Order from OTS or SLA $1.10 63-13003

Trans. of German patent 870,400, cl. 12c. gr. 22, by Farbenfabriken Bayer, pat. from 8 July 42, appl. announced 5 Feb 53, pub. 12 Mar 53.

DESCRIPTORS: *Isocyanates, Hydroxides, Adhesives, Isocyanate plastics, Chemical reactions.

A method for preparation of polyisocyanates is described. Triols and/or tetrols, possibly mixed with diols, are reacted with diisocyanates in such an amount that at least 1 mol diisocyanate is present per hydroxyl group. (Author)

Chiusoli, Gian Paolo and Cometti, Giuseppe.
COUPLING OF ALLYLIC DERIVATIVES BY NICKEL CARBONYL. [1963] 2600 words, 17 refs.
Order from CTS(Chem) $10.40 CTS(Chem)-336
subsequent copies $1.75/ea.

Trans. of [la] Chimica e [l']Industria (Italy) 1963, v. 45 [no. 4] p. 401-404.

DESCRIPTORS: *Hallocarbons, Allyl radicals, *Butenes, *Propenes, Polymerization, Catalysts, Complex compounds, *Nickel catalysts, *Carbonyl radicals

Dansi, Alfredo and Pasini, Claudio.
THE DIMERIZATION OF INDENE. [1963] 4p. 4 refs.
Order from SLA $1.10 63-10938

Trans. of Gazzetta Chimica Italiana, 1951, v. 81 [no. 6] p. 507-510.

DESCRIPTORS: *Indene, Mixtures, Separation, Molecular isomerism, Crystallization, Bromination, *Bromocarbons, Chemical properties.

To diindene or "unsaturated diindene" there had been assigned by Bergmann and Taubadel the constitution of a 2-alpha-hydrindylindene, assumed also more recently by other authors. From the study carried out on various preparations of diindene, we have come to the conclusion that the product which is commonly obtained during the dimerization by action of acids on indene is not a single substance but a mixture of two unsaturated isomers. This conclusion is supported by the behavior of diindene during crystallization, but even more by the fact that we have been able, at variance with other authors, to isolate by bromination of diindene two dibromo derivatives having different properties. (Author)

Dem'yanov, N. Ya. and Vil'yams, V. V.
THE REACTIVITY OF UNSATURATED HYDROCARBONS WITH NITROUS ANHYDRIDE AND NITRIC OXIDE. THE PRODUCT OF THE ACTION OF N_2O_3 ON CYCLOPENTENE. 1940, 20p. 6 refs.
Order from OTS or SLA $1.60 63-10360

Trans. of [Akademiya Nauk SSSR. Otdelenie Matematicheskikh i Estestvennykh Nauk] Izvestiya, 1931, no. 7, p. 1123-1140.

DESCRIPTORS: Hydrocarbons, *Cyclopentenes, *Nitrogen compounds, Oxides, Anhydrides, Chemical reactions

Deyrup, J. A., Schmidt, H., and Karrer, P.
ON THE CHEMISTRY OF THE WIELAND-GUMLICH ALDEHYDE. REPT. 55 on the Curare Alkaloids. [1962] 11p. (figs. omitted) 22 refs.
Order from SLA $1.60 63-10516

Trans. of Helv[etica] Chim[ica] Acta (Switzerland) 1962, v. 45, no. 6, p. 2266-2272.

DESCRIPTORS: *Curare alkaloids, *Aldehydes, Acetyl radicals, Synthesis, Molecular rotation, Spectrographic analysis, Molecular structure.

A synthesis of diaboline (N(a)-acetyl-Wieland-Gumlich aldehyde) is described. Rotational and spectral arguments are employed in a discussion of the configuration of the C-17 center of the Wieland-Gumlich aldehyde and some of its derivatives. These results are explained in terms of a conformational analysis of these compounds. (Author)

Entelis, S. G., Nesterov, O. V., and Bondareva, G. G.
INTERFACIAL POLYCONDENSATION OF PHTHALOYL CHLORIDE WITH PIPERAZINE. [1962] 6p.
Order from ATS $10.00 ATS-32P66R

Trans. of Vysokomolekul[yarnye] Soedin[eniya] (USSR) 1962, v. 4, no. 7, p. 995-999.

DESCRIPTORS: Pyrazines, *Chlorides, Condensation reactions, Surfaces.

Ercoli, Raffaele, Santambrogio, Elio, and Casagrande Giulia Tettamanti.
SYNTHESIS AND PROPERTIES OF TRICOBALT ENNEACARBONYLMETHANE AND OF DERIVATIVES REPRESENTED BY $Co_3(CO)_9CX$. [1963] 14p. 9 refs.
Order from CTS(Chem) $16.00 CTS(Chem)-325
subsequent copies $2.60/ea.

Trans. of [la] Chimica e [l']Industria (Italy) 1962, v. 44, no. 12, p. 1344-1349.

DESCRIPTORS: *Complex compounds, *Metalorganic compounds, *Cobalt compounds, *Carbonyl radicals, Methyl radicals, Halogen compounds, Esters, Synthesis, Chemical properties

Fisher, L. B., Terpugova, M. P., and Kotlyarevskii, I. L.
CATALYTIC DEHYDROGENATION OF 2, 3-DIMETHYLBUTANE. [1963] 6p. 6 refs.
Order from OTS or SLA $1.10 63-14315

Trans. of [Akademiya Nauk SSSR. Sibirskoe Otdelenie. Izvestiya] 1957, no. 9, p. 53-56.

DESCRIPTORS: *Methyl radicals, *Butanes, *Dehydrogenation, Catalysis, Reaction kinetics, *Butadienes, Synthesis (Chemistry), Butenes.

Goubeau, J. and Ricker, E.
HYDRAZINE-BORANE AND ITS PYROLYSIS PRODUCTS. 17 Oct 62, 30p. 14 refs.
Order from SLA $2.60 63-10585

Trans. of Z[eitschrift für] Anorg[anische] Chem[ie] (East Germany) 1961, v. 310, p. 123-142.

DESCRIPTORS: *Hydrazines, *Boranes, Pyrolysis, Solubility, Dipole moments, Crystal structure, Spectra (Infrared).

Hydrazine-monoborane, m. p. 61°, is obtained in good yield by the reaction of hydrazine sulfate with sodium borohydride. Its solubilities, dipole moment, crystal structure, and IR spectra were investigated. During pyrolysis, one mole of hydrogen and a portion of the hydrazine are quickly released. Under controlled conditions, $H_2B\text{-}NH\text{-}NH\text{-}BH_2$ can be isolated from the reaction products in good yield being present in a polymeric form. It is unaffected by water and even acids; it is crystalline, and was characterized by means of its powder diagram and its IR spectrum. Further pyrolysis leads to rather unstable compounds -- some of them explosive -- of the approximate composition $(HBN)_n$, in which the N-N bonding of hydrazine is retained to a great extent. (Author)

Hoffmann, A. W.
EFFECT OF AMMONIA AND OF AMINES ON SULPHOCYANURIC ACID ETHER AND ON CYANURIC CHLORIDE: NORMAL ALKYLATED MELAMINES. [25 Apr 62] 13p.
Order from SLA $1.60 63-10301

Partial trans. (p. 2770-2776) of [Chemische Berichte] (Germany) 1885, v. 18, p. 2755-2781.

DESCRIPTORS: *Cyanuric acid, Sulfur compounds, Ethers, *Cyanogen chlorides, *Melamine, *Ammonia, *Amines, Chemical reactions.

Ishida, Kiyoharu.
TERNARY EQUILIBRIA BETWEEN SOME LIQUID HYDROCARBONS AND LIQUID AMMONIA. PT. 2. A SYSTEM OF n-HEXANE, CYCLOHEXANE AND LIQUID AMMONIA AND A SYSTEM OF n-HEPTANE, OCTENE-1, AND LIQUID AMMONIA. [1962] 5p. 10 refs.
Order from SLA $1.10 63-10475

Trans. of Kogyo Kagaku Zasshi (Japan) [1954] v. 57, no. 7, p. 479-481.
Another trans. is available from ATS $10.00 as ATS-60M40J [1960] 5p.

DESCRIPTORS: *Chemical equilibrium, Hydrocarbons, *Ammonia, *Hexanes, *Cyclohexanes, *Heptanes, Solvents, Ethylenes, Separation, Liquids.

Studies were made of the equilibrium of the system of n-hexane, cyclohexane and liquid ammonia at 20° C and that of n-heptane, octene-1 and liquid ammonia at 20° C and 0° C. It was found that in the latter system, the selective property became small at the lower temperature and that liquid ammonia could be used as a solvent for the separation of an olefin hydrocarbon from paraffin by extraction, but the naphthene type hydrocarbon can be subjected to selective extraction only with difficulty. When the mutual solubility of one component of a binary hydrocarbon mixture and the solvent is not much different from that of the other component and the solvent, as is the case with the present systems, the partition can be calculated over the whole range of concentrations of a ternary system from the mutual solubilities of each of the binary oil systems and the solvent. (Author)

Kargin, V. A., Mirlina, S. Ya. and others.
STRUKTUR UND EIGENSCHAFTEN ISOTAKTISCHER POLYACRYLSÄURE UND IHRE SALZE (Structure and Properties of Isotactic Polyacrylic Acid and its Salts). 4p.
Order from TIB $1.10

Trans. in German of Akademiya Nauk SSSR. Doklady, 1960, v. 135, no. 4, p. 893-895.
Another trans. is available in English from OTS or SLA $1.10 as 62-23981, Courtaulds ML-3307, 18 May 61 [6]p.

DESCRIPTORS: Chemical properties, *Acids, *Salts, *Polymers, Acrylic resins, Molecular structure, Crystal structure.

Kazaryan, L.
A NEW WAY OF USING CALCIUM CARBIDE (PRELIMINARY REPORT). 6 Dec 51, 10p. 6 refs.
Order from OTS or SLA $1.10 62-20150

Trans. of Zhurnal Obshchei Khimii (USSR) 1934, v. 4, no. 10, p. 1347-1352.

DESCRIPTORS: *Calcium compounds, *Carbides, Acetylenes, Alcohols, Chemical reactions.

Kohler, Fritz and Brandeis, Johann.
PROCESS FOR THE PREPARATION OF N-SUBSTITUTED MONOUREINS OF GLYOXAL. [1962] 4p.
Order from OTS or SLA $1.10 63-10078

Trans. of German patent application B 36767 IVb/12p, filing date 6 Aug 55, pub. 20 Sep 56, assigned to BASF.

DESCRIPTORS: *Glyoxal, Aldehydes, *Urea derivatives, Synthesis.

A process is claimed for the preparation of N-substituted monourein of glyoxal, characterized in that urea derivatives which are poorly soluble to practically insoluble in water and contain at least one free hydrogen atom at each nitrogen atom are reacted with glyoxal in aqueous medium, at pH values of about 4 to about 8, possibly using emulsifiers, at an elevated temperature, suitably at 40-80°C. (Author)

Kolobikhin [V. A.] Tyuryaev, I. Ya. and others.
BUTADIENE PRODUCTION THROUGH OXIDATIVE DEHYDROGENATION OF n-BUTYLENES. [1963] 4p. 2 refs.
Order from OTS or SLA $1.10 63-14317

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1962, v. 144 [no. 5] p. 1053-1055.
Another trans. is available from ATS $5.25 as ATS-77P64R [1962] 3p.

DESCRIPTORS: *Butadienes, Production, *Butenes, Oxidation. Dehydrogenation, Manufacturing methods.

Komori, Saburo; Nagashima, Takayuki, and Arasugi, Ei.
PREPARATION OF CETYL VINYL ETHER. [1963] 9p.
Order from K-H $9.00 K-H 12427 a

Trans. of Kogyo Kagaku Zasshi (Japan) 1954, v. 57, p. 932-934.

DESCRIPTORS: *Vinyl radicals, *Ethers.

Korshak, V. V.
NEWS IN THE SYNTHESIS OF ORGANO-ELEMENTARY HIGH MOLECULAR COMPOUNDS. 4 Apr 63 [27]p. 114 refs. FTD-TT-63-121.
Order from OTS or SLA $2.60 63-19346

Unedited rough draft trans. of Vsesoyuznoe Khimicheskoe Obshchestvo. Zhurnal (USSR) 1962, v. 7, no. 2, p. 122-131.

DESCRIPTORS: *Polymers, Synthesis, *Organic compounds, *Heavy elements, Bibliographies.

Köster, R. and Rotermund, G.
SYNTHESIS OF ALKANEDIOLS FROM MONOOLEFINS BY WAY OF HETEROCYCLIC BORANES. 16 Nov 60, 2p. 5 refs.
Order from SLA $1.10 63-10607

Trans. of Angew[andte] Chem[ie] (West Germany) 1960, v. 72 [no. 4] p. 138-[139].
Another trans. is available from SLA mi$1.80, ph$1.80 as 60-16904 [1960] 3p.

DESCRIPTORS: *Glycols, Synthesis, *Organoboranes, Dehydrogenation.

Koton, M. M.
ELEMENTO-ORGANIC, UNSATURATED COMPOUNDS AND THEIR POLYMERS [Elementoorganicheskie Nepredel'nie Soedineniya i Ikh Polimeri]. [1963] 30p.
Order from K-H $30.00 K-H 6868

Trans. of Uspekhi Khimii (USSR) 1957, v. 26, no. 10, p. 1125-1140.
Another trans. is available from LC or SLA mi$2.70, ph$4.80 as 60-17443, RTS-535, Oct 58 [22]p.

DESCRIPTORS: *Organic compounds, *Polymers.

For abstract see Technical Translations 4: 79, 1960.

Mamedaliev, Yu. G., Dalin, M. A. and others.
CATALYTIC DEHYDROGENATION OF ISOPENTENES TO ISOPRENE. [1963] 11p.
Order from K-H $11.00 K-H 10010 b

Trans. of Akademiya Nauk Azerbaidzhanskoi SSR [Baku]. Doklady, 1956, v. 12, no. 8, p. 547-552.

DESCRIPTORS: *Isoprene, *Pentenes, Molecular structure, *Catalysts, Dehydrogenation.

Mamedaliev, Yu. G., Dalin, M. A., and Shikhmamedbekova, A. Z.
CATALYTIC DEHYDROGENATION OF ISOPENTENE TO ISOPRENE. [1963] 12p.
Order from K-H $12.00 K-H 10010 a

Trans. of Akademiya Nauk Azerbaidzhanskoi SSR [Baku]. Doklady, 1955, v. 11, no. 12, p. 811-817.

DESCRIPTORS: *Isoprene, *Pentenes, Molecular structure, *Catalysts, *Dehydrogenation.

Mantel, S.
THE THERMAL DECOMPOSITION OF GASEOUS HYDROCARBONS. [1962] 13p. (figs. refs. omitted).
Order from SLA $1.60 63-10450

Trans. of Przemysl Chemiczny (Poland) 1928, v. 12, no. 7, p. 333-[341].

DESCRIPTORS: *Pyrolysis, Gases, *Hydrocarbons, Decomposition, Temperature, Velocity, Impurities.

The decomposition was carried out and its dependence upon the temperature, velocity of gas and the size of a granular filler in the oven determined. Hydrogen produced from natural gas has been contaminated with 0.7 per cent CH_4. It was impossible to reach a higher degree of purity at temperatures up to 1700°. (Author)

Marchetti, E. S. and Saracco, G.
SOLUBILITY OF GASES IN ORGANIC SOLVENTS. [1963] 7p.
Order from ATS $8.25 ATS-46Q68I

Trans. of Ann[ali di] Chim[ica] (Italy) 1960, v. 50, p. 1573-1580.

DESCRIPTORS: *Gases, *Solubility, *Organic solvents.

Matsui, K., Sunaga, T., and Kasai, K.
AZO DYES CONTAINING $-CH_2CH(OH)CH_2N\begin{matrix}R\\R\end{matrix}$ GROUPS, PT. I. [1963] 13p.
Order from ATS $13.75 ATS-54Q68J

Trans. of Yuki Gosei Kagaku Kyokai Shi (Japan) 1962, v. 20, no. 5, p. 453-459.

DESCRIPTORS: *Azo radicals, *Dyes, Amides, Propanols.

Michaelis, A.
INVESTIGATIONS ON AROMATIC BORON COMPOUNDS. [1962] 16p. 11 refs.
Order from SLA $1.60 63-10573

Trans. of [Chemische] Berichte (Germany) 1894, v. 27, p. 244-262.
A partial trans. (p. 244-249) is available from SLA as 58-2265.

DESCRIPTORS: *Boron compounds, Mercury compounds, Chlorides, Boric acids, *Organoboranes, Synthesis.

Minisci, Francesco and Galli, Remo.
CARBON FREE RADICALS: OXIDATION BY LEGAND TRANSFER OR ELECTRON TRANSFER AND AFFINITY TOWARD CONJUGATED OLEFINS. [1963] 950 words, 6 refs.
Order from CTS(Chem) $3.80 CTS(Chem)-335
subsequent copies $0.60/ea.

Trans. of [Ia] Chimica e [l']Industria (Italy) 1963, v. 45, no. 4, p. 448-450.

DESCRIPTORS: *Free radicals, *Carbon, Oxidation, Electrons, *Ethylenes, Chemical reactions

Moiseev, I. I., Vargaftik, M. N. and Syrkin, Ya. K.
DIE OXYDATIONSREAKTIONEN DER OLEFINE (Olefine Oxidation Reactions). 12p.
Order from TIB $2.10

Trans. in German of Akademiya Nauk SSSR. Doklady, 1960, v. 130, no. 4, p. 820-823.
Other translations are available in English from ATS $7.00 as ATS-60M42R [1960] 5p. and from LC or SLA mi$1.80, ph$1.80 as 61-15471, DSIR LLU M. 2333 [1960] 8p.

DESCRIPTORS: *Ethylenes, *Oxidation, Chemical reactions.

Okawara, M. and Sumitomo, Y.
SYNTHESES OF THIOL POLYMERS FROM POLYVINYL ALCOHOL AND THE PROPERTIES THEREOF. [1963] 14p.
Order from ATS $18.95 ATS-64Q67J

Trans. of Kogyo Kagaku Zasshi (Japan) 1958, v. 61, no. 11, p. 1508-1513.

DESCRIPTORS: Synthesis (Chemistry), *Thiols, Polymers, *Polyvinyl alcohol.

Okhlobystina, L. B., Fainzieberg, A. A., and Novikov, S. S.
AN IMPROVED METHOD FOR PREPARING α, ω-DINITRO-ALKANES. 5 July 62, 3p. 8 refs. [Trans] T.1404; [DSIR] NLL M. 8884.
Order from OTS or SLA $1.10 63-15204

Trans. of #Akademiya Nauk SSSR. Otdelenie Khimicheskikh Nauk. Izvestiya, 1962, no. 3, p. 517-518.

DESCRIPTORS: *Nitro radicals, *Alkanes, Nitrites, Silver compounds, Bromine compounds, Petroleum, Ethers, Chemical reactions.

An improved method for the preparation of α, ω-dinitro-alkanes is proposed which involves the reaction of silver nitrite with α, ω-dibromo-alkane in a mixture of pet. ether while heating. (Author)

Paushin, Ya. M., Topchiev, A. V., and Kurashev, M. V.
ALKYLIERUNG VON PHENOL ISOBUTYLEN MIT HOMOGENEN UND HETEROGENEN KATALYSATOREN (Alkylation of Phenol by Isobutylen with Homogeneous and Heterogeneous Catalysts).
Order from TIB $0.85

Trans. in German of Akademiya Nauk SSSR. Doklady, 1960, v. 130, no. 5, p. 1033-[1036].

DESCRIPTORS: *Phenols, *Butenes, *Catalysts, Alkylation.

Paushkin, Ya. M., Yuzvyak, A. G., and Rubinshtein, A. I.
SYNTHESIS OF DIMETHYLCYCLOHEXADIENE AND OF VINYLCYCLOHEXENE THROUGH DIMERIZATION OF BUTADIENE. [1963] 7p. 6 refs.
Order from OTS or SLA $1.10 63-14312

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1962, v. 144, no. 3, p. 581-584.
Another trans. is available from ATS $7.00 as ATS-83P64R [1962] 7p.

DESCRIPTORS: *Diene synthesis, *Methyl radicals, *Cyclohexadienes, *Vinyl radicals, *Cyclohexenes, Synthesis, *Butadienes, *Hexenes.

Schenker, Erhard.
NEWER METHODS IN PREPARATIVE ORGANIC CHEMISTRY. IV. THE USE OF COMPLEX BOROHYDRIDES AND OF DIBORANE IN ORGANIC CHEMISTRY. 21 Nov 61, 70p. 865 refs.
Order from SLA $6.60 63-10545

Trans. of Angewandte Chemie (West Germany) 1961, v. 73, no. 3, p. 81-107.
Another trans. is available from SLA $8.10 as 62-16363 [1962] [84]p.

DESCRIPTORS: Chemistry, Organic compounds, Synthesis, Reduction, *Complex compounds, *Borohydrides, Hydrides, *Diboranes, *Lithium compounds, Aluminum compounds.

Schmeisser, M. and Brändle, K.
ACYL NITRATES AND PERCHLORATES. IV. $ClNO_3$ AS STARTING MATERIAL FOR ACYL NITRATES. 6 Apr 62, 2p. 3 refs.
Order from SLA $1.10 63-10596

Trans. of Angewandte Chemie (West Germany) 1957, v. 69, p. 781.

DESCRIPTORS: *Chlorine compounds, *Acyl radicals, *Nitrates, Synthesis.

Schulz, G. V. and Loehmann, H. J.
ON THE KINETICS OF HYDROLYTIC DECOMPOSITION OF CELLULOSE: PTS. 2, 4A, 4C. Rept. 261 on Macromolecular Compounds. [2 Dec 60] 10p. 7 refs.
Order from SLA $1.10 63-10214

Trans. of J[ournal für] Prakt[ische] Chem[ie] (Germany) 1941, v. 157, p. 246-248, 258-259, 262-264.

DESCRIPTORS: Dynamics, *Hydrolysis, Decomposition, *Cellulose, Polymerization, Phosphoric acids, Solutions.

Contents:
Mathematical relations
Determination of the degree of polymerization of celluloses in phosphoric acid solution
Determination of the K_m constant of cellulose in phosphoric acid solution.

Stepukhovich, A. D. and Kats, G. I.
KINETICS AND MECHANISM OF HYDROCARBON DECOMPOSITION. III. [CONT'D] KINETICS AND MECHANISM OF DECOMPOSITION OF BUTADIENE UNDER LOW PRESSURES [Kinetika i Mekhanizm Raspada Uglevodorodov. III. Kinetika i Mekhanizm Termicheskogo Raspada Divinila pri Nizkikh Davleniyakh]. [1963] 14p. 13 refs.
Order from OTS or SLA $1.60 63-14333

Trans. of Zhur[nal] Fiz[icheskoi] Khim[ii] (USSR) 1954, v. 28 [no. 7] p. 1174-1185.
Another trans. is available from NRCC as NRCC TT-586.

DESCRIPTORS: *Hydrocarbons, *Decomposition, *Pyrolysis, *Butadienes, Low pressure research, Acetylenes, Vinyl radicals, *Reaction kinetics.

(See also 62-14856)

Staudinger, H. and Kupfer, O.
REACTIONS OF METHYLENE. III. DIAZOMETHANE. 2 Aug 61, 11p. 21 refs.
Order from SLA $1.60 63-10604

Trans. of Chemische Berichte (Germany) 1912, v. 45, p. 501-509.

DESCRIPTORS: *Methanes, *Azo radicals, Chemical reactions, Ketenes, *Hydrazines, Phenyl radicals, Benzyol radicals.

Stepukhovich, A. D., Stal'makhova, L. S., and Eremin, V. V.
KINETICS AND MECHANISM OF HYDROCARBONS DECOMPOSITION. VI. KINETICS OF THERMAL DECOMPOSITION OF GASEOUS PARAFFINS IN THE PRESENCE OF ACETYLENE [Kinetika i Mekhanizm Raspada Uglevodorodov. VI. Kinetika Termicheskogo Raspada Gazoobraznykh Parafinov v Prisutstvii Atsetilena]. [1963] 6p. 15 refs.
Order from OTS or SLA $1.10 63-14332

Trans. of Zhur[nal] Fiz[icheskoi] Khim[ii] (USSR) 1954, v. 28 [no. 11] p. 1878-1881.
Other translations are available from ATS as RJ-267 and from SLA on loan as R-2098, 6p.

DESCRIPTORS: *Hydrocarbons, Decomposition, *Pyrolysis, *Propanes, *Butanes, *Acetylenes, Vinyl radicals, Temperature, *Reaction kinetics.
Kinetics of thermal decomposition of propane and butanes in the presence of various acetylene quantities (1to20%) as additives was studied under the pressure of decomposing hydrocarbons, ~ 10mm, and at various temperatures. It was found, that acetylene does not diminish the decomposition rate of the hydrocarbons under the experimental conditions and is not inhibitor. Comparison of theoretic calculations and of found experimental results leads to the conclusion, that the vinyl-radical has a high reactivity under cracking conditions. (Author)

Teplitskaya, R. A.
LA LUCHA CONTRA LAS FORMACIONES RESINOSAS (Bor'ba so Smolyanymi Obrazovaniyami) (Control of Resinous Formations) 9p. CID: 62-178.
Order from OTS, ETC or CID $0.95 62-26827

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1960 [v. 35] no. 6, p. 22-24.

DESCRIPTORS: Control, Organic compounds, *Complex compounds, Resins.

Tinyakova, E. I., Kovalevskaya, R. N. and Zhuravleva, T. G.
POLYMERISATION UND KOPOLYMERISATION VON DIENEN UND OLEFINEN AN EINEM CHROMOXYD-KATALYSATOR (Polymerization and Copolymerization of Diens and Olefins on a Chromium-oxide Catalyst). 5p.
Order from TIB $1.20

Trans. in German of Akademiya Nauk SSSR. Doklady, 1959, v. 129, no. 6, p. 1306-1308.
Another trans. is available in English from LC or SLA mi$1.80, ph$1.80 as 61-10743 [1960] 5p.

DESCRIPTORS: *Polymerization, *Copolymerization, Diene synthesis, Ethylenes, *Chromium compounds, Oxides, Catalysts.

Topchiev, A. V., Paushkin, Ya. M., and Kurashev, M. V.
UNTERSUCHUNG UEBER DIE ALKYLIERUNG VON PHENOLEN MIT AMYLENEN MIT BORTRIFLUORID ALS KATALYSATOR (Investigation of Phenol Alkylation by Amylenes in the Presence of Boron-fluoride). 4p.
Order from TIB $1.10

Trans. in German of Akademiya Nauk SSSR. Doklady, 1960, v. 130, no. 3, p. 559-561.

DESCRIPTORS: *Phenols, *Boron compounds, Fluorides Catalysts, Alkylation.

Wikhterle, O. and Exner, O.
SYNTHESIS OF POLYPEPTIDES BY THE REACTION OF AMIDES WITH ALKOXIDES. 13 Nov 62 [15]p. 5 refs.
Order from SLA $1.60 63-10788

Trans. of [Sbornik Chekhoslovatskykh Khimicheskykh Rabot] 1960, v. 25, p. 1371-1376.

DESCRIPTORS: *Peptides, Synthesis, *Amides, *Acetamides, Alkoxy radicals, Ethanols, Chemical reactions, Ethyl radicals, Sodium compounds, Acetates, Ammonia.

It was established that by the reaction of ethyl alcohol with acetamide in the presence of sodium alcoholate no N-ethylacetamide is formed but ethyl acetate, sodium acetate, ammonia and other compounds are obtained. (Author)

Yoshitomi, K., Watanabe, H., and Tokunaga, T.
THE EFFECT OF PROCESSING AND EXTRACTING SOYBEANS ON THE QUALITY OF PASTE LECITHIN. [1962] [7]p.
Order from SLA $1.10 62-20003

Trans. of [Yukagaku] (Japan) 1961, v. 10, no. 9, p. 540-542.

DESCRIPTORS: *Soybean oil, Processing, Separation, *Phospholipids, Colors, Discoloration, Storage, Temperature, Solvent extraction.

The effect of processing and extracting soybeans on the color of lecithin as the criterion of quality was studied. The browning of soybean lecithin in the miscella desolventizing process was investigated. Considerable coloring of lecithin occured both in the miscella concentrating and the stripping process. Lecithin obtained by extracting dehulled soybeans has a lighter color. Increased extraction temperatures gave a higher yield but a darker color. (Author)

Zhigach, A. F.
INVESTIGATION OF THE CHEMICAL PROPERTIES OF BORON HYDRIDES AND THEIR DERIVATIVES. [1962] 11p. 14 refs.
Order from SLA $1.60 63-10680

Trans. of mono. Congr[ès] Int[ernational de] Chim[ie] Pure et Appl[ique] (no. 16) Paris, 1957. Sect[ion de] Chim[ie] Minérale. Mem[oires] 1958, p. 467-473.

DESCRIPTORS: *Boron compounds, Hydrides, *Organoboranes, Chemical properties, Alcohols, Amines, *Pentaboranes, *Complex compounds, Chemical reactions.

The reactions of pentaborane with methyl, ethyl, and butyl alcohols were examined. It was confirmed that the different alkoxyboranes and the boric acid esters are formed according to the relative proportions of the starting components. The reaction equations were deduced from the experimental data. The reactions of pentaborane with acetone and with dimethyl-, diethyl-, trimethyl-, and triethylamine were also examined. Equations are proposed for the principal reactions of the thermal decomposition of complexes of pentaborane with derivatives of diborane and of borane. A series of complexes of pentaborane with derivatives of diborane and of borane was obtained and determined. A new derivative of borazine (B-triethylborazine) was obtained by the thermal decomposition of triethylborazine. The physical and chemical properties of B-triethylborazine were determined. (Author)

Ziegler, Karl.
NEW DEVELOPMENTS IN ORGANOMETALLIC SYNTHESIS. [1962] 22p. 60 refs.
Order from SLA $2.60 63-10587

Trans. of Angew[andte] Chem[ie] (West Germany) 1956, v. 68 [no. 23] p. 721-729.
Other translations are available from SLA mi$3.00, ph$6.30 as 59-15975 [1959] 38p. and from ES $11.00 as 61-25136 [1961] 21p.

DESCRIPTORS: *Metalorganic compounds, *Alkyl radicals, *Ethylenes, *Hydrides, Chemical equilibrium, Metallic compounds, *Aluminum compounds, Chemical bonds, Catalysts, *Ziegler catalysts.

The discussion covers in detail the addition of metal alkyls to ethylene, the reversible reaction between metal hydrides and olefins, the preparation of aluminum alkyls and their reactions with higher olefins, introduction of functional groups, the reaction of aluminum alkyls with triple bonds as well as the aluminum-organic synthesis of bifunctional compounds. (Author)

Zscharn, Alexander.
THE INSTABILITY OF TETRAALKYLLEAD COMPOUNDS, 14 Oct 47, 2p. 2 refs.
Order from SLA $1.10 63-10991

Trans. of Chemiker Zeitung (Germany) 1940, v. 64, 18 Dec, p. 498.

DESCRIPTORS: *Complex compounds, Alkyl radicals, *Lead compounds, Decomposition, Stability.

Physical Chemistry

Amelin, A. G.
SULPHURIC ANHYDRIDE ABSORPTION WITH WATER SULPHURIC ACID SOLUTIONS (Absorbtsiya Sernogo Angidrida Vodnymi Rastvorami Sernoi Kisloty). 17p. (foreign text included) 7 refs. DTC-1.
Order from OTS, ETC or DTC $1.30 62-28788

Trans. of Zhurnal Prikladnoi Khimii (USSR) 1944, v. 17 [no. 6] p. 319-325.

DESCRIPTORS: *Sulfuric acid, *Anhydrides, *Absorption, Solutions, Experimental data.

Astreeva, O. M., Guseva, V. I., and Popov, N. S.
UNTERSUCHUNG DER BILDUNGSPROZESSE DES KALZIUMHYDROSULFOALUMINATS MIT EINER MIKRO-KAMERA (Investigation of the Formation Processes of Calciumhydrosulfoaluminate with a Microcamera). 7p.
Order from TIB $1.45

Trans. in German of Tsement (USSR) 1961, v. 27, no. 6, p. 23-25.

DESCRIPTORS: *Calcium compounds, Hydrogen compounds, *Sulfur compounds, *Aluminates, *Microphotography, Chemical reactions.

Baccaredda, Mario.
CRYSTALLINITY OF HIGH POLYMERS AND THEIR DYNAMIC MECHANICAL PROPERTIES. Lecture given at European Conference on Plastics and Rubber (no. 1) Paris, May 62. [1963] 4800 words.
Order from CTS(Chem) $19.20 CTS(Chem)-324
subsequent copies $3.20/ea.

Trans. of [Ia] Chimica e [I']Industria (Italy) 1962, v. 44, no. 12, p. 1383-1389.

DESCRIPTORS: *Polymers, *Crystal structure, Morphology, Mechanical properties, Dynamics, *Sound transmission, Velocity, Damping, Phase transition, *Plastics, *Fibers, *Synthetic rubber

Damianovich, Horacio.
DYNAMIC COMPARISON OF PHYSICAL-CHEMICAL SYSTEMS: NEW CONTRIBUTIONS TO THE STUDY OF THE RELATIONS BETWEEN THE ENERGY OF ACTIVATION OF THE MOLECULES AND THE ISOKINETIC TEMPERATURES. 3 June 61, 20p. 17 refs.
Order from SLA $1.60 63-10361

Trans. of [Universidad Nacional del Litoral]. Inst[ituto de] Invest[igaciones] Cient[ificas y] Tecn[ologicas]. Anales (Argentina) 1932, v. 1, p. 15-29.

DESCRIPTORS: Physical chemistry, *Reaction kinetics, Molecules, *Heat of activation, Temperature, Catalysts.

Starting with the idea that time and rate must be included in the comparison of the physical-chemical systems in evolution, it is demonstrated by the energetic method as a first approximation, in the case where accelerators do not participate and the Vant' Hoff-Arrhenius equation is applicable, that in isokinetic physical-chemical transformations or those with equal molar time of evolution the energies of activation of the molecules are proportional to the absolute temperatures necessary for the isokinetics.

Delimarskii, Yu. K.
THE THERMAL ANALYSIS OF ARTIFICIAL ALUMINO SILICATES. [1962] [15]p. (figs. omitted) 21 refs.
Order from OTS or SLA $1.60 63-10362

Trans. of Ukrainskii Khimicheskii Zhurnal (USSR) 1931, v. 6, p. 175-185.

DESCRIPTORS: *Minerals, *Aluminum compounds, Silicates, Oxides, Synthesis, Chemical precipitation, *Thermochemistry, Chemical precipitation.

Dobkina, B. M. and Petrova, E. I.
THE DETERMINATION OF TANTALUM IN TITANIUM ALLOYS BY ULTRAVIOLET SPECTROPHOTOMETRY. Mar 60 [6]p. 8 refs. BISI Trans. 1642; [DSIR] NLL M.4932.
Order from OTS or SLA $1.10 62-25877

Trans. of Zavodskaya Laboratoriya (USSR) 1957, v. 23, no. 4, p. 421-422.
Another trans. is available from OTS or SLA $1.10 as 62-14655 [1960] [5]p.

DESCRIPTORS: *Titanium alloys, *Tantalum, *Ultraviolet spectrophotometers, *Ultraviolet spectroscopy.

For Abstract See Technical Translations 8:236, 1962

Egorov, M. M., Egorova, T. S. and others.
INFLUENCIA DE LA NATURALEZA DE LA SUPERFICIE DEL GEL DE SILICE Y DEL CUARZO SOBRE SUS PROPIEDADES ADSORBENTES. PARTE II: ADSORCION DE VAPORES DE AGUA, ALCOHOL METILICO Y NITROGENO EN GELES DE SILICE CON DISTINTO GRADO DE HIDRATACION (Vliyanie Prirody Poverkhnosti Silikageliya i Kvartsa na ikh Adsorbtsionnye Svoistva. 2: Adsorbtsiya Parov Vody, Metilovogo Spirta i Azota na Silikagelyakh Raslichnoi Stepeni Gidratatsii) (Influence of Silica Gel and Quartz Surface Nature on Their Adsorbent Properties. Part II: Adsorption of Water Methyl Alcohol and Nitrogen Vapours by Silica Gel of Different Hydration Grades). 22p. 29 refs. CID: 62-144.
Order from OTS, ETC or CID $1.55 62-26793

Trans. in Spanish of Zhurnal Fizicheskoi Khimii (USSR) 1958 [v. 32] no. 11, p. 2624-2633.

DESCRIPTORS: Surface properties, *Adsorption, *Gels, *Silicon, Methanols, Nitrogen, Steam.

Egorov, M. M., Krasil'nikov, K. G., and Kiselev, V. F.
INFLUENCIA DE LA NATURALEZA DE LA SUPERFICIE DEL GEL DE SILICE Y DEL CUARZO SOBRE SUS PROPIEDADES ADSORBENTES. PARTE I: ESTUDIO DE LA HIDRATACION DE LA SUPERFICIE DE LA SILICE (Vliyanie Prirody Poverkhnosti Silikagelya i Kvartsana Ikh Adsorbtsionnye Svoistva. 1: Isledovaniya Gidratatsii Poverkhnosti Kremnezema) (Influence of Silica Gel and Quartz Surface Nature on Their Adsorbent Properties. I: Study of Silica Surface Hydration). 18p. 23 refs. CID: 62-145.
Order from OTS, ETC or CID $1.30 62-26794

Trans. in Spanish of Zhurnal Fizicheskoi Khimii (USSR) 1958 [v. 32] no. 10, p. 2448-2454.

DESCRIPTORS: *Surface properties, Adsorption, *Gels, *Silicon, Quartz.

Gadzhiev, S. N., and Sharifov, K. A.
DETERMINATION OF THE HEAT OF FORMATION OF INDIUM ANTIMONIDE BY FUSION IN A CALORIMETRIC VESSEL. [1962] [5]p. 6 refs.
Order from OTS or SLA $1.10 63-13423

Trans. of Akad[emiya] Nauk SSSR. Dokl[ady] 1961, v. 136 [no. 6] p. 1339-1341.

DESCRIPTORS: *Heat of formation, *Indium compounds, Calorimeters, *Antimonides.

Gusynin, V. I. and Tal'roze, V. L.
AN INVESTIGATION OF ENERGY TRANSFER ALONG THE $--CH_2--$ CHAIN USING THE METHOD OF LUMINESCENCE EXTINCTION. [1962] 5p. 4 refs.
Order from OTS or SLA $1.10 63-15316

Trans. of Akad[emiya] Nauk SSSR. Dokl[ady] 1960, v. 135, no. 5, p. 1160-1163.

DESCRIPTORS: *Luminescent materials, *Benzene derivatives, Ethylenes, Dioxides, Heterocyclic compounds, Xylenes, Energy, Photons, Luminescence, Quenching (Inhibition), Alcohols, Water, Carbon tetrachloride.

Gonikberg, M. G. and El'yanov, B. S.
VON DER ROLLE DES LÖSUNGSMITTELS BEI DEN MENSCHUTKINREAKTIONEN (The Role of the Solvent in Menshutkin's Reactions). 11p.
Order from TIB $2.00

Trans. in German of Akademiya Nauk SSSR, Doklady, 1960, v. 130, no. 3, p. 545-548.

DESCRIPTORS: *Solvent action, *Chemical reactions.

Hellmann, H. and Kassatotschkin, W.
METALLIC BINDING ACCORDING TO THE COMBINED APPROXIMATION METHOD (Die Metallische Bindung Nach dem Kombinierten Näherungsverfahren) tr. by D. A. Sinclair. 1963, 19p. 24 refs. NRCC Technical trans. 1066.
Order from NRCC $1.00 NRCC C-4334

Trans. of Acta Physicochimica U. R. S. S., 1936, v. 5, no. 1, p. 23-44.

DESCRIPTORS: *Alkali metals, *Alkaline earth metals, *Chemical bonds, Theory, *Lattices, Heat of sublimation, Compressive properties.

Ipat'ev, V. V., Tikhomirov, V. I., and Soboleva, N. F.
ESTUDIO DE LA VELOCIDAD DE ABSORCION DEL SULFURO DE HIDROGENO POR DISOLUCIONES ARSENIATO SODICAS (Issledovanie Skorosti Pogloshcheniya Serovodoroda Mysh'yakovo-Sodovymi Rastvorami) (Study of the Absorption Rate of Hydrogen Sulphide by Sodium Arsenate Solutions). 18p. 1 ref. CID: 62-180.
Order from OTS, ETC or CID $1.30 62-26829

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1958 [v. 31] no. 10, p. 1472-1477.
Another trans. is available in English from ATS $9.75 as ATS-75M38R [1960] 7p.

DESCRIPTORS: *Absorption, Hydrogen compounds, *Sodium compounds, *Arsenates, Sulfides.

Ipatiev, W. and Orlow, N.
PYROGENETIC DISSOCIATION OF FEW AROMATIC COMPOUNDS UNDER HYDROGEN-PRESSURE AND WITH THE COMBINED ACTION OF CATALYSTS. [1962] 13p. 16 refs.
Order from SLA $1.60 63-10690

Trans. of Chemische Berichte (Germany) 1927, v. 60, p. 1963-1971.

DESCRIPTORS: Heat, *Dissociation, Benzenes, *Hydrogen, *Pressure, Catalysts, Catalysis, Aluminum compounds, Oxides, *Organic compounds, *Pyrolysis, Phenols, Cresol, Aniline, Methanes, Tetralin, Biphenyl, Naphthenes, Anthracenes, Mesitylene, Naphtha.

Kafarov, V. V. and Gordievskii, L. A.
DETERMINACION DEL EQUILIBRIO LIQUIDO-VAPOR EN MEZCLAS AZEOTROPICAS CON DISOLVENTE (Opredelenie Ravnovesiya Zhidkost' -Par v Azeotropnykh Sistemakh s Rastvoritelem) (Determination of Liquid-Vapour Equilibrium in Azeotropic Solvent Mixtures) 23p. 12 refs. CID: 62-152.
Order from OTS, ETC or CID $1.55 62-26801

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1956 [v. 29] no. 4, p. 535-543.

DESCRIPTORS: Chemical equilibrium, Solvent action, Liquids, Vapors, *Phase studies.

Kasatochkin, V. I., Zamoluev, V. K. and others.
THERMOPHYSICAL PROPERTIES OF TRANSITION FORMS OF THE CARBON. [1963] 6p. 12 refs.
Order from OTS or SLA $1.10 63-14320

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1960, v 135 [no. 1] p. 121-124.

DESCRIPTORS: *Carbon, Carbon block, Graphite, Coke, *Phase studies, Heat treatment, Transition temperature, *Thermochemistry, Physical properties

Kashtanov, L. I. and Kazanskaya, N. V.
EL PROBLEMA DEL MECANISMO DE INHIBICION DEL PROCESO DE OXIDACION DEL SULFITO SODICO (K Voprosu o Mekhanizme Ingibirovaniya Protsessa Okisleniya Sul'fita Natriya) (The Problem of the Inhibitive Mechanism of the Sodium Sulfite Oxidation Process). 7p. 6 refs. CID: 62-127.
Order from OTS, ETC or CID $0.90 62-26776

Trans. in Spanish of #Zhurnal Fizicheskoi Khimii (USSR) 1956, v. 30, no. 8, p. 1707-1709.

DESCRIPTORS: *Oxidation inhibitors, *Sodium compounds, *Sulfites, Oxidation.

Kazanskii, V. B., and Pariiskii, G. B.
ELECTRON PARAMAGNETIC RESONANCE SPECTRUM (EPR) OF THE ETHYL RADICAL, ADSORBED ON SILICA GEL SURFACE. [1962] 3p. 4 refs.
Order from OTS or SLA $1.10 63-10231

Trans. of Kinetika i Kataliz (USSR) 1961, v. 2, no. 4, p. 507-508.

DESCRIPTORS: *Ethyl radicals, *Free radicals, *Paramagnetic resonance, Adsorption, Spectrographic data, Electrons, Silicon compounds, Dioxides, Gels, Adsorbent

The EPR spectrum of free radicals, formed during γ-irradiation of ethane, adsorbed on silica gel surface at - 196°C, was produced. (Author)

Khlebnikova, V. N. and Morozov, V. P.
THERMODYNAMIC FUNCTIONS OF PYRAMIDAL MOLECULES: MONO- AND DI-DEUTEROSUBSTITUTED HYDRIDES OF GROUP V ELEMENTS. [1962] [4]p. 8 refs.
Order from OTS or SLA $1.10 62-33555

Trans. of Ukr[ainskii] Khim[icheskii] Zhurnal (USSR) 1961, v. 27, p. 550-551.

DESCRIPTORS: *Group V elements, *Phosphorus compounds, *Arsenic compounds, *Antimony compounds, Hydrides, *Deuterated compounds, *Thermodynamics, Tables.

The present article, gives the results of calculations of the thermodynamic functions of molecules of the types RH_2D and RHD_2 (R--P, As, Sb). The calculations were made by the methods of statistical thermodynamics for the ideal gas state, assuming the oscillations to be harmonic and the rotation to be rigid over the temperature interval 298.2 -- 1000°K at P=1 atm. The calculated results (in cal/mole. degree) are given. (Author)

Khoroshin, A. V. and Temkin, M. I.
THERMOELECTRIC AND THERMODIFFUSION PHENOMENA IN SOLUTIONS OF ELECTROLYTES. [1963] [29]p. 25 refs.
Order from OTS or SLA $2.60 63-14677

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1952, v. 26, no. 6, p. 773-786.

DESCRIPTORS: *Thermoelectricity, *Thermal diffusion, *Electrolytes, Thermocouples, Entropy, Silver compounds, Chlorides, Measurement.

Khrushchev, M. S. and Krylov, V. N.
SOBRE EL MECANISMO Y CINETICA DE LA FORMACION DE FERROSILICATO DE 75% (K Voprosu o Mekhanizme i Kinetike Obrazovaniya 75%-go Ferrosilitsiya) (On the Mechanism and Kinetics of 75% Ferrosilicon Formation) 28p. 32 refs. CID: 62-182.
Order from OTS, ETC or CID $1.75 62-26831

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1961 [v. 34] no. 4, p. 756-765.

DESCRIPTORS: *Iron alloys, *Silicon alloys, Production.

Krczil, Franz.
TECHNICAL ADSORPTION MATERIALS IN CONTACT CATALYSIS: SELECTED PARTS. Dec 41 [115]p. 353 refs.
Order from SLA $9.60 63-10471

Trans. of mono. Technische Adsorptionsstoffe in der Kontaktkatalyse, n.p., 1938, p. 10-97.

DESCRIPTORS: *Adsorption (Physical), *Surface-active substances, *Catalysis, Carbon, Silicic acids, Silicates, Oxides, Aluminum compounds, Metals, Mixtures, Acids, Salts, Chemical reactions, *Reaction kinetics.

Contents:
Production of surface-active catalysts
Binary contacts
Multiple-component contacts.

Krongauz, V. A. and Bagdasar'yan, Kh. S.
TRANSFER OF EXCITATION ENERGY AND THE SENSITIZATION OF CHEMICAL REACTIONS IN THE RADIOLYSIS OF SOLUTIONS OF ORGANIC DISULFIDES. [1962] [7]p. 6 refs.
Order from OTS or SLA $1.10 63-15315

Trans. of Akademiya Nauk SSSR. Doklady, 1960, v. 132, no. 5, p. 1136-1139.

DESCRIPTORS: Organic compounds, Phenyl radicals, Benzyl radicals, Benzoyl radicals, Alkoxy radicals, Allyl radicals, Ethyl radicals, *Sulfides, *Radiolysis, Chemical reactions, Sensitivity, Excitation, Energy, Reaction kinetics.

Kontorovich, S. I., Segalova, E. E. and Rebinder, P. A.
MECHANISMUS DER VERZÖGERNDEN WIRKUNG VON ZUSÄTZEN EINES OBERFLÄCHENAKTIVEN PLASTIFIKATORS BEI DER HYDRATION DES KALZIUMOXYDS (The Mechanism of the Delaying Effect of a Surface-active Plastifier Added in the Process of Calciumoxide Hydration).
Order from TIB $1.55

Trans. in German of Akademiya Nauk SSSR. Doklady, 1959, v. 129, no. 4, p. 847-850.
Another trans. is available in English from CB $5.00.

DESCRIPTORS: Surface properties, *Plasticizers, Hydrates, *Calcium compounds, Oxides.

Kuznetsov, M. D. and Sagalovskii, A. E.
CINETICA DEL PROCESO DE ABSORCION DE SULFURO DE HIDROGENO POR HIDROXIDO DE HIERRO (O Kinetike Protsessa Pogloshcheniya Serovodoroda Gidrookis'yu Zheleza) (Kinetics of Hydrogen Sulphide Absorption by Iron Hydroxide). 19p. CID: 62-181.
Order from OTS, ETC or CID $1.35 62-26830

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1954, v. 27. no. 1, p. 5-11.

DESCRIPTORS: Hydrogen compounds, Sulfides, *Iron compounds, Hydroxides, *Absorption.

Löffler, H. J. and König, H.
ELECTRON-MICROSCOPIC IMAGE OF WATER AND AQUATIC SOLUTIONS DROPS (Zur Elektronenmikroskopischen Abbildung von Tropfen asu Wasser und Wassrigen Lösungen). [1963] [23]p. (foreign text included) 11 refs.
Order from SLA $2.60 63-10929

Trans. of Kolloid-Zeitschrift (West Germany) 1955, v. 142, no. 2/3, p. 65-73.

DESCRIPTORS: *Colloids, *Aerosols, *Water, *Sodium compounds, Chlorides, Solutions, Crystals, *Electron microscopy.

Series of methods are described showing how the water drops or drops of suspensions or solutions, especially NaCl solution, can be investigated in an electron microscope after being dried on specially prepared object slides. A short calculation points out how the radii of free drops are interrelated with the radii of their contact areas on the slide film. Knowing the concentration of the solution, the wetting angle with the base can be estimated. Conversely, knowing the wetting angle and from the radius of contact area and the magnitude of separated crystals, one can draw the conclusion about the concentration of the pulverized solution. (Author)

Losev, B. I. and Lidina, N. G.
DIE OXYDATION VON KOHLEN UND HUMUSSÄUREN UNTER DER EINWIRKUNG VON ULTRASCHALL (Oxidation of Coals and Humic Acids under Ultrasonic Action).
Order from TIB $0.85

Trans. in German of Akademiya Nauk SSSR. Doklady, 1960, v. 133, no. 1, p. 186-[188].

DESCRIPTORS: *Oxidation, *Coal, Acids, *Ultrasonics *Humic acids.

Lukyanova, O. I. and others.
KINETISCHE EIGENSCHAFTEN DER HYDRATIONS-ERHÄRTUNG VON SULFATEN (Kinetic Features of the Solidification of Sulphates on Hydration).
Order from TIB $1.55

Trans. in German of Akademiya Nauk SSSR. Doklady, 1960, v. 130, no. 4, p. 816-819.

DESCRIPTORS: *Sulfates, *Hydrates, Solids, Chemical reactions.

Luther, Robert and Goldberg, Emanuel.
CONTRIBUTION TO THE KINETICS OF PHOTOCHEMICAL REACTIONS. I. THE INHIBITION BY OXYGEN OF PHOTOCHEMICAL CHLORINATION REACTIONS IN RELATION TO PHOTOCHEMICAL INDUCTION, DEDUCTION AND ACTIVATION. [1963] [15]p. 26 refs.
Order from SLA $1.60 63-10978

Trans. of Z[eitschrift für] Physik[alische] Chem[ie, Leipzig] (Germany) 1906, v. 56, p. 43-56.

DESCRIPTORS: *Photochemistry, Reaction kinetics, *Chlorination, Inhibition, Oxygen.

Lutskii, A. E.
EL ENLACE DE HIDROGENO Y LAS PROPIEDADES FISICAS DE ALGUNOS DERIVADOS DEL FENOL Y DEL ANISOL. II: DERIVADOS HALOGENADOS DEL FENOL (Vodorodnaya Svyaz'i Fizicheskie Svoistva Nekotorykh Zameshchennykh Fenola i Anizola. II: Galogenozameshchennye Fenoly) (The Hydrogen Bond and Physical Properties of some Products Derived from Phenol and Anisole. II: Halogenated Phenols). 17p. 23 refs. CID: 62-103.
Order from OTS, ETC or CID $1.30 62-26752

Trans. in Spanish of #Zhurnal Obshchei Khimii (USSR) 1955 [v. 25] no. 6, p. 1086-1092.

DESCRIPTORS: *Hydrogen, *Chemical bonds, *Phenols, Chlorine compounds, Methyl ether, Ethyl ethers, Physical properties.

Lyudkovskaya, M. A. and Leibush, A. G.
SOLUBILITY OF CARBON DIOXIDE IN SOLUTIONS OF ETHANOLAMINES UNDER PRESSURE [Rastvorimost' Uglekislogo Gaza v Rastvorakh Etanolaminov pod Davlenyem]. [1962] 12p. 6 refs.
Order from OTS or SLA $1.60 63-10414

Trans. of Zhurnal of Prikladnoi Khimii (USSR) 1949, v. 22, no. 6, p. 558-567.
Other translations are available from ATS as RJ-3 and from OTS or ETC $1.85 as 61-17290, MTWL-595, 15p.

DESCRIPTORS: *Carbon dioxide, Ethanols, *Amines, *Solubility, Pressure.

Manecke, G. and Bonhoeffer, K. F.
ELECTRICAL CONDUCTIVITY OF ANION EXCHANGE MEMBRANES. [1962] 17p. 11 refs.
Order from SLA $1.60 63-10292

Trans. of Zeitschrift für Elektrochemie (West Germany) 1951, v. 55, p. 475-481.

DESCRIPTORS: *Ion exchange, *Membranes, Electrical conductance, Measurement, *Electroosmosis, Potassium compounds, Chlorides, *Electrochemistry.

Membranes were prepared from anion exchangers of various, fixed ion concentrations, and their specific electrical conductance was measured with KCl-solutions of various concentrations. These measurements were used to compare calculations of the specific conductivity from the concentration and mobility of ions in the membrane. The concentration and mobility of ions were determined separately in the experiments. The experimental results agree satisfactorily. The mean activity coefficient for soluble, mobile ions in the exchanger was established in high external ion concentrations through determination of the chloride ions. The mean activity coefficient for low external ion concentrations was determined by membrane potential measurements, based on the theories of Teorell and Meyer-Sievers. (Author)

Markov, B. F.
TEMPERATURE DEPENDENCE OF ELECTRICAL CONDUCTIVITY OF MOLTEN EUTECTIC SALT MIXTURES. [1963] 5p.
Order from K-H $5.00 K-H 4050 b

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 102, no. 6, p. 1163-1164.
Another trans. is available from ASLIB, 3 Belgrave Square, London, S. W. 1, England as ASLIB-GB39,

DESCRIPTORS: *Eutectics, *Salts, *Mixtures, Melting, Temperature, *Electrical conductance.

Maslanka-Ormanowa, Z.
ELECTROLYTIC PREPARATION OF LEAD-CALCIUM ALLOYS. [1963] 53p.
Order from K-H $53.00 K-H 5866 c

Trans. of Prace Inst[ytutow] Hutnic[zych] (Poland) 1953, v. 5, p. 89-104.

DESCRIPTORS: *Lead alloys, *Calcium alloys, *Electrolysis, Preparation.

Moritz, P.
ON A RELATIONSHIP BETWEEN VISCOSITY AND THE SURFACE TENSION OF LIQUIDS. [1962] [15]p. 16 refs.
Order from SLA $1.60 62-20134

Trans. of Periodica Polytechnica (Hungary) 1959, v. 3, p. 167-176.
Another trans. is available from SLA $1.10 as 62-18757 [1962] [9]p.

DESCRIPTORS: *Viscosity, *Surface tension, *Liquids.

The surface tension of the liquids can be calculated from the viscosity n by means of the equation

$$\log \log \eta = m \gamma^{1/4} + C$$

This equation contains two individual constants: m and C. In unassociated liquids, it is possible to calculate with the mean values of m = 1.2 and C = -2.9--even though with a reduced accuracy--if the viscosity is substituted in millipoises and the surface tension in dyne/cm. It was demonstrated that the surface tension of most liquids can be calculated with an accuracy which is satisfactory from the viscosity with retention of C = -2.9 and with the assumption of an additivity of the constant m. The atomic increments of the constant m are given for the most important non-metals. (Author)

Natta, G. and Corradini, P.
GENERAL ASPECTS OF THE CRYSTALLINE STRUCTURE OF STEREOREGULAR POLYMERS. Communication presented at the National Congress of Chemistry (no. 9) held jointly with the Swiss Chemical Society, Naples, 27 May-9 June 62. [1963] 9000 words, 53 refs.
Order from CTS(Chem) $36.00 CTS(Chem)-334
subsequent copies $6.00/ea.

Trans. of [la] Chimica e [l']Industria (Italy) 1963, v. 45, no. 3, p. 299-314.

DESCRIPTORS: *Polymers, *Stereochemistry, *Crystal structure, Molecular isomerism, Molecular structure, Physical properties, *Plastics, Rubber, *Synthetic rubber, *Fibers

Nikitin, E. E.
THE VIBRATIONAL DISTRIBUTION FUNCTION OF POLY-ATOMIC MOLECULES IN UNIMOLECULAR DECOMPOSITION. [1962] [6]p. 9 refs.
Order from OTS or SLA $1.10 63-13865

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1960, v. 135, no. 6, p. 1442-1445.

DESCRIPTORS: *Molecules, Decomposition, Heat, *Chemical equilibrium, Distribution, Vibration, *Reaction kinetics.

Ormont, B. F.
THE RELATION BETWEEN THE CHEMICAL AND MECHANICAL STRENGTH OF VERY HARD BODIES. [1963] 10p. 19 refs.
Order from OTS or SLA $1.10 63-14007

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1956, v. 106, no. 4, p. 687-690.

DESCRIPTORS: *Hardness, *Solids, *Surface properties, Energy, Crystals, Chemical properties, Physical properties, Correlation techniques.

Paneth, Fritz and Peters, Kurt.
HELIUM INVESTIGATIONS. III. THE BEHAVIOR OF HELIUM TOWARD GLASS AND PALLADIUM, AND THE QUESTION OF HELIUM COMPOUNDS. 1 May 61, 21p. 35 refs.
Order from SLA $2.60 63-10536

Trans. of Z[eitschrift] für Physikalische Chemie, [Leipzig] (Germany) 1928, v. 1B, p. 253-269.

DESCRIPTORS: *Helium, Chemical compounds, *Glass, *Palladium, *Permeability, Temperature, Separation, Diffusion, Adsorption, Solutions, Platinum electrodes.

Pecherskaya, A. G. and Stender, V. V.
INFLUENCIA DE LAS IMPUREZAS EN LA OBTENCION ELECTROLITICA DEL ZINC A PARTIR DE DISOLUCIONES DE SULFATO (Vliyanie Primesei pri Elektroliticheskom Poluchenii Tsinka iz Sernokislykh Rastvorov) (Influence of Impurities on Electrolytic Obtention of Zinc from Sulphate Solutions). 41p. 23 refs. CID: 62-173.
Order from OTS, ETC or CID $2.35 62-26822

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1950 [v. 23] no. 9, p. 920-935.

DESCRIPTORS: *Zinc, Sulfates, *Electrolysis, *Electrodeposition.

Perlov, P. M.
THE HYDROLYSIS OF SODIUM CARBONATE DURING LEACHING OF SCHEELITE IN AN AUTOCLAVE (O Gidrolize Uglekislogo Natriya v Usloviyakh Vyshchelachivaniya Sheelita v Avtoklave). [1962] [9]p. (foreign text included) 4 refs.
Order from OTS or SLA $1.10 63-10616

Trans. of Obogashchenie Rud (USSR) 1958 [v. 3] no. 2[14] p. 32-34.

DESCRIPTORS: *Hydrolysis, *Sodium compounds, *Carbonates, *Calcium compounds, *Tungstates, Sterilizers, Electrical conductance, Measurement, Chemical analysis, Minerals.

There is no appreciable hydrolysis of sodium carbonate during the decomposition of calcium tungstate with soda solutions at increased temperatures. The comparatively high consumption of soda in the autoclave process is not the result of hydrolysis of sodium carbonate. (Author)

Pozin, M. E. and Tumarkina, E. S.
CONCERNING THE INFLUENCE OF THE PHYSICAL CHARACTERISTICS OF LIQUIDS ON THE FORMATION OF MOBILE FOAMS. [1962] 15p. (figs. omitted) 12 refs.
Order from OTS or SLA $1.60 63-10577

Trans. of #Zhurnal Prikladnoi Khimii (USSR) 1954, v. 27, no. 11, p. 1170-1179.

DESCRIPTORS: *Foams, Mobile, Liquids, *Surface-active substances, Gases, Viscosity, Surface tension, Laboratory equipment, Physical properties.

Ratchford, Robert J. and Rickert, Hans.
AN ELECTROCHEMICAL KNUDSEN CELL IN THE INVESTIGATION OF THE THERMODYNAMICS OF SELENIUM VAPOR AND CONCERNING THE DECOMPOSITION OF Ag_2Se. [1963] [7]p. (figs. omitted) 14 refs.
Order from SLA $1.10 63-10909

Trans. of Zeitschrift fŭr Elektrochemie (West Germany) 1962, v. 66, no. 6, p. 497-502.

DESCRIPTORS: *Electrochemistry, *Electrolytic cells, *Selenium, Vapors, *Thermodynamics, *Silver compounds, Selenides, Decomposition, Reaction kinetics.

In the first part of the present paper the thermodynamics of selenium vapor is investigated. In connection with this a new kind of method, the electrochemical Knudsen cell, is described. In the second part of the paper the rate of vaporization of selenium from solid Ag_2Se in vacuo is investigated and discussed as a function of the chemical potential of the silver and of the selenium in Ag_2Se.

Rinck, E.
THE SOLIDIFICATION DIAGRAM OF CALCIUM-SODIUM ALLOY. [1963] 2p.
Order from SLA $1.10 63-10990

Trans. of [Academie des Sciences, Paris]. Compte[s] Rendu[s] (France) 1963, v. 192, p. 1378-1381 (pub. by Gauthier-Villars et Cie, Paris).

DESCRIPTORS: *Calcium alloys, *Sodium alloys, Thermodynamics, Eutectics, Phase studies.

Roginskii, S. and Schechter, A.
CHEMICAL REACTIONS IN ELECTRICAL DISCHARGES. III. INVESTIGATION OF THE HETEROGENEOUS RECOMBINATION OF ATOMS (Chemische Reaktionen in Elektrischen Entladungen. III. Untersuchung der Heterogenen Rekombination von Atom) tr. by Jerome Danburg. Oct 62 [20]p. 9 refs. AmMetSoc T-G-186.
Order from OTS or SLA $1.60 63-19207

Trans. of Acta Physicochimica U. R. S. S., 1937, v. 6, no. 3, p. 401-418.

DESCRIPTORS: *Electrical discharges, *Chemical reactions, *Recombination reactions, *Hydrogen, *Nitrogen, *Oxygen, *Platinum catalysts, *Tungsten, *Argon, Stabilization, Metals, Oxides, Surfaces

The recombination of hydrogen and nitrogen atoms on Pt and W over a wide range of temperature was investigated. On Pt, in the entire temperature range, a recombination coefficient close to unity was obtained. No recombination on tungsten could be detected. The stabilizing effect of argon upon atomic nitrogen and oxygen was shown and the significance of this phenomenon was analyzed. Different observations about recombination of oxygen atoms on oxides and on metal surfaces are described. (Author)

Roginskii, S. Z., Yanovskii, M. I. and others.
A RAPID CHROMATOGRAPHIC METHOD OF MEASURING ADSORPTION ISOTHERMS OF GASES AND VAPORS. [1962] [6]p. 6 refs.
Order from OTS or SLA $1.10 63-13719

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1960, v. 133 [no. 4] p. 878-881.

DESCRIPTORS: *Chromatographic analysis, *Adsorption, Thermochemistry, Gases, Vapors.

The present paper presents a comparison of two variants of chromatographic measurements of adsorption isotherms employing the usual vacuum procedure.

Rostovskii, E. N.
SOBRE LA POROSIDAD Y GRADO DE DISPERSION DEL CATALIZADOR EN LA SINTESIS HETEROGENEA DEL ACETATO DE VINILO (O Poristosti i Dispersnosti Katalizatora pri Geterogennom Sinteze Vinilatsetata) (Porosity and Dispersive Degree of the Catalyst in the Heterogenous Synthesis of Vinyl Acetate). 17p. 28 refs. CID: 62-156.
Order from OTS, ETC or CID $1.30 62-26805

Trans. in Spanish of Zhurnal Prikladnoi Khimii (USSR) 1959, v. 32, no. 12, p. 2691-2697.

DESCRIPTORS: *Catalyst, Synthesis, *Vinyl radicals, *Acetates, Porosity.

Rostovskii, E. N. and Arbuzova, I. A.
SOBRE LA CONCENTRACION DEL CATALIZADOR EN LA SINTESIS CATALITICA HETEROGENEA DEL ACETATO DE VINILO (O Kontsentratsii Katalizatora pri Geterogenno-Kontaktnom Sinteze Vinilatsetata) (Catalyst Concentration in Heterogenous Catalysis of Vinyl Acetate) 12p. 16 refs. CID: 62-157.
Order from OTS, ETC or CID $1.10 62-26806

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1959 [v. 32] no. 10, p. 2258-2261.

DESCRIPTCRS: *Catalyst, Synthesis, *Vinyl radicals, *Acetates.

Rostovskii, E. N. and Ushakov, S. N.
SOBRE EL TIEMPO DE PERMANENCIA DE LOS REACTIVOS EN LA ZONA DE CONTACTO, DURANTE LA SINTESIS CATALITICA HETEROGENEA DEL ACETATO DE VINILO (O Vremeni Prebyvaniya Reagentov v Zone Kontaktirovaniya pri Geterogennokataliticheskom Sinteze Vinilatsetate) (On Permanence Time of Reagents in the Residence Zone During Heterogenous Catalytic Synthesis of Vinyl Acetate) 13p. 9 refs. CID: 62-155.
Order from OTS, ETC or CID $1.10 62-26804

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1959 [v. 32] no. 9, p. 2060-2064.

DESCRIPTORS: *Acetates, Synthesis, Catalysis, *Vinyl radicals.

Ryabchikov, L. N. and Tikhinskii, G. F.
A MASS SPECTROMETRIC STUDY OF THE SUBLIMATION OF BERYLLIUM CHLORIDE. [1962] [4]p. 8 refs.
Order from OTS or SLA $1.10 63-13575

Trans. of #Fiz[ika] Metal[lov i] Metaloved[enie] (USSR) 1960, v. 10 [no. 4] p. 635-636.

DESCRIPTORS: *Beryllium compounds, Chlorides, *Sublimation, Vapor pressure, *Heat of sublimation, Dissociation, *Heat of reaction, *Mass spectroscopy.

It was established that the vapor over beryllium chloride is a mixture of monomeric $BeCl_2$ and dimeric Be_2Cl_4 molecules. The fraction of dimers in the region of 496 to 578° K is about 0.5 to 1.5%, and the total number of molecules increases with a rise in temperature. The heats of sublimation of polymeric and dimeric beryllium chloride molecules have been determined; they are $\Delta H_1 = 34 \pm 1$ kcal./mole and $\Delta H_2 = 44 \pm 1$ kcal./mole. The energy of dissociation of the dimer, calculated from the heats of sublimation, is $\Delta H = 24 \pm 2$ kcal./mole. (Author)

Schläpfer, P., Audykowski, T., and Bukowiecki, A.
SOLUTION SPEED OF OXYGEN IN DIFFERENT LIQUIDS [Über die Lösungsgeschwindigkeit des Sauerstoffes in Verschiedenen Flüssigkeiten]. [1963] 20p. 12 refs.
Order from SLA $1.60 63-14656

Trans. of Schweizer Archiv für Angewandte Wissenschaft und Technik, 1949, v. 15 [no. 10] p. 308-316. Another trans. is available from SLA as I-602, 24p.

DESCRIPTORS: *Oxygen, Absorption, Liquids, Organic compounds, Solutions, Salts, Water.

A determination was made of the speed of oxygen absorption from the gaseous phase of several organic liquids, mixtures of organic liquids, aqueous solutions of organic liquids and aqueous salt solutions with the aid of a special apparatus.

Schumacher, H. J.
MECHANISM OF THE THERMAL REACTION BETWEEN CHLORINE AND OZONE. 18 Jan 61, 19p. 8 refs.
Order from SLA $1.60 63-10549

Trans. of Z[eitschrift für] Phys[ikalische] Chem[ie] Frankfurt (West Germany) 1957, [Neue folge] v. 13, p. 353-367.

DESCRIPTORS: Reaction kinetics, *Chlorine, *Ozone, *Thermochemistry, Decomposition, Quantitative analysis, Chemical reactions, Heat of activation.

A complete scheme is given for the reaction between chlorine and ozone, in which allowance is made for the chlorine trioxide decomposition occasioned by the chlorine heptoxide formation. Experiments are performed in which the chlorine heptoxide formed in the course of the reaction is determined. The old experiments of Hamann and Schumacher, as well as those newly performed, permit quantitive portrayal to the reaction end of the rate equations derived from the reaction scheme. The activation energies of the partial reactions are given. (Author)

Shchukarev, S. A. and Novikov, G. I.
THERMODYNAMIC INVESTIGATIONS OF CERTAIN TUNGSTEN CHLORIDES. I. SATURATION VAPOR PRESSURES OF THE HEXA-, PENTA-, AND OXYTETRACHLORIDES OF TUNGSTEN. [1962] 7p. (tables figs. omitted) 12 refs.
Order from OTS or SLA $1.10 63-10844

Trans. of Zhurnal Neorganicheskoi Khimii (USSR) 1956, v. 1 [no. 3] p. 357-361.

DESCRIPTORS: *Tungsten compounds, *Chlorides, *Thermodynamics, *Thermochemistry, Vapor pressure, Heat of sublimation, Vaporization, Entropy, Boiling, Melting.

According to the experimental data for the saturated vapor pressure of WCl_6, WCl_5 and $WOCl_4$ we calculated the energy and entropy of sublimation and vaporization and also the boiling point and fusion point (roughly) of these compounds. (Author)

Sotnikov, V. S. and Belanovskii, A. S.
DIE ADSORPTION EINIGER METALLIONEN BEIM BEIZEN UNS SPUELEN VON GERMANIUM UND SILIZIUM (Adsorption of Ions of Certain Metals when Germanium or Silicon are being Etched and Washed).
Order from TIB $1.55

Trans. in German of Akademiya Nauk SSSR. Doklady, 1961, v. 137, no. 5, p. 1162-1165.

DESCRIPTORS: *Adsorption, Ions, *Germanium, *Silicon, Photoengraving.

Toropov, N. A. and others.
UEBER DIE BILDUNG DES ALPHA-HYDRATS DES DICALCIUMSILIKATS (Formation of the Alpha-Hydrate of Dicalcium Silicate).
Order from TIB $1.30

Trans. in German of Akademiya Nauk SSSR. Doklady, 1960, v. 135, no. 1, p. 98-100.

DESCRIPTORS: Hydrates, Calcium compounds, *Silicates.

Ueno, Itaru.
MANUFACTURE OF ANHYDROUS MAGNESIUM CHLORIDE FROM MAGNESIUM OXIDE AND AMMONIUM CHLORIDE AS RAW MATERIALS. I. EXPERIMENT ON CALCINATION BELOW 300°. II. EFFECT OF EXCLUSING AIR DURING CALCINATION. [1963] 15p. 9 refs.
Order from SLA $1.60 63-14154

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1944, v. 47, p. 849-853.

DESCRIPTORS: *Magnesium compounds, *Chlorides, Oxides, *Ammonium compounds, *Low temperature research, Air.

Vember, T. M.
MECHANISM OF THE EFFECT OF AROMATIC AMINES ON THE FLUORESCENCE AND PHOTOCHEMICAL OXIDATION OF ANTHRACENE COMPOUNDS. 7 May 63, 7p. 15 refs. JPRS: 19077.
Order from OTS $0.50 63-21765

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 147, no. 1, p. 123-126.

DESCRIPTORS: *Anthracenes, *Photochemistry, Oxidation, *Fluorescence, Quenching (Inhibition), *Amines, Quantum statistics, Oxidation.

The fluorescence quenching constants of several anthracene compounds were determined for a whole series of aromatic and aliphatic amines, as well as changes under the effect of these amines of the quantum yield of photo-oxidation (Φ_0) of 9, 10-di-n-propylanthracene. All the measurements were conducted with alcoholic solutions. The bimolecular quenching constants were calculated from the formula derived from the expression for the quantum yields of fluorescence in the presence of a quenching agent. (Author)

Zhigach, K. F., Finkel'shtein, M. Z., and Timokhin, I. M.
STRUCTURAL VISCOSITY OF AQUEOUS SOLUTIONS OF THE CARBOXYMETHYLCELLULOSE [Strukturnaya Vyazkost' Vodnykh Rastvorov Karboksimetiltsellyulozy]. [1963] 7p. 6 refs.
Order from OTS or SLA $1.10 63-14335

Trans. of Akad[emiya] Nauk SSSR. Doklady, 1959, v. 126 [no. 5] p. 1025-1028.
Another trans. is available from ATS $7.00 as ATS-80P58R [1961] 5p.

DESCRIPTORS: *Carboxymethylcellulose, Solutions, Viscosity.

EARTH SCIENCES

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 152 (EARTH SCIENCES SERIES). 30 Apr 63, 29p. JPRS: 18972.
Order from OTS $1.00 63-21715

Consists of abstracts of articles from selected scientific and technical journals of Czechoslovakia.

DESCRIPTORS: *Abstracts, *Czechoslovakia, Geodesics, Geography, Geology, Economics, Agriculture, Population, Maps.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 185 (EARTH SCIENCES SERIES). 28 May 63, 13p. JPRS: 19437.
Order from OTS $0.50 63-21933

Consists of abstracts of articles from selected scientific and technical journals of Hungary and Poland.

DESCRIPTORS: *Abstracts, *Geophysics, *Hungary, *Poland, *Geodesy, *Mapping, Numerical analysis, *Computers, Triangulation, Adhesives, Scientific organizations, *Tellurometers, *Photogrammetry, Conferences, Chemical analysis, Minerals, *Geology.

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 62 (GEOGRAPHY SERIES) (GEODESY SERIES). 20 May 63, 14p. JPRS: 19276.
Order from OTS $0.50 63-21858

Trans. of selected abstracts from Referativnyi Zhurnal. Geografiya (USSR) 1963, no. 1; Referativnyi Zhurnal. [Astronomiya i] Geodeziya (USSR) 1963, nos. 1, 3.

DESCRIPTORS: *Abstracts, *China, *Geography, *Geodesics, *Paleoecology, *Archaeology, Ecology, *Wheat, *Agriculture, *Trees, *Africa, Maps, Grinders, *Aerial photography, Photogrammetry.

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 65 (GEOGRAPHY SERIES). 28 May 63, 10p. JPRS: 19454.
Order from OTS $0.50 63-21935

Trans. of selected abstracts from Referativnyi Zhurnal. Geografiya (USSR) 1963, no. 2.

DESCRIPTORS: *Abstracts, *China, *Geography, *Anthropology, *Oceanology, *Meteorology, *Climatology, Ecology, Soils, *Agriculture, *Irrigation systems.

BULLETIN (IZVESTIYA) ACADEMY OF SCIENCES USSR, GEOPHYSICS SERIES, 1963, NO. 1, P. 1-114. Jan 63, 1v.
Order from AGU $7.50, $40.00/year

Trans. of Akademiya Nauk SSSR, Izvestiya. Seriya Geofizicheskaya, 1963, no. 1, p. 3-190.

DESCRIPTORS: *Geophysics, Physics, Periodicals, *Seismic waves, Earthquakes, *Stratigraphy, *Well drilling, Mathematical analysis, Reflection, Propagation Gravity anomalies, *Numerical methods and procedures, *Magnetic properties, *Geophysical prospecting, Rock (Geology), *Wind, *Water waves, *Clouds, *Particle spectra.

Donabedov, A. T., Sidorov, V. A. and others.
ZUR FRAGE DER VERHALTNISSE ZWISCHEN DEN GESCHWINDIGKEITEN DER GEGENWARTIGEN VERTIKALBEWEGUNGEN DER ERDKRUSTE, DEN GEOPHYSIKALISCHEN FELDERN UND DEN GEOSTRUKTURELLEN ELEMENTEN (On the Relation between the Velocities of Modern Vertical Motion of the Earth Crust, Geophysical Fields and Geostructural Elements).
Order from TIB $1.55

Trans. in German of Akademiya Nauk SSSR. Doklady, 1960, v. 132, no. 4, p. 810-813.
Another trans. is available in English from AGI $8.00.

DESCRIPTORS: Velocity, Earth, *Geophysics.

Gerasimov, I. P.
GEOGRAPHICAL OBSERVATIONS IN THE PRICASPIA AREA (Geograficheskie Nablyudeniya v Prikaspii) tr. by David Bell. [1962] [24]p. (refs. figs. omitted). G-6200A.
Order from OTS or SLA $2.60 62-23503

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Geograficheskaya, 1951 [no. 4] p. 3-15.

DESCRIPTORS: *Geography, *Geological survey, *Hydrology, Geologic age determination, Stratigraphy, Geology, Rivers, Terrain, Soils.

Khomichevskaya, L. S.
THE RESIDUAL VEIN POLYGONAL RELIEF OF THE FAR EAST (Ob Ostatochnom Zhil'no-Poligonal'nom Rel'efe Dal'nago Vostoka). Apr 63 [16]p. 20 refs. RTS-2174.
Order from OTS or SLA $1.60 63-19126

Trans. of A[kademiya] N[auk] SSSR. Institut Merzlotoved[eniya]. Trudy, 1960, v. 16, p. 36-45.

DESCRIPTORS: *Terrain, Permafrost, Soil mechanics, Geology, Geography.

Pillewizer, W.
THE GERMAN SPITZBERGEN EXPEDITION IN 1962. 4 Apr 63 [8]p. JPRS: 18551.
Order from OTS $0.50 63-21505

Trans. of Petermanns Geographische Mitteilungen (East Germany) 1962, v. 106, no. 4, p. 286.

DESCRIPTORS: *Arctic regions, *Geological survey, Terrain, *Glaciers, Morphology, Ecology, Aerial reconnaissance, *Ionosphere.

Ponomarev, E. A.
THE NATURE OF THE GEOMAGNETIC COAST EFFECT, tr. by E. R. Hope. Feb 63 [9]p. 4 refs. DSIS T 382 R.
Order from NRCC NRCC C-4347

Trans. of mono. Geomagnitnye Vozmushcheniya (Geomagnetic Disturbance) Moscow, 1960, p. 35-41.

DESCRIPTORS: *Terrestrial magnetism, Magnetic fields, *Magnetic properties, *Beaches, Electric fields, Mathematical analysis, Ionospheric disturbances Antarctic regions, Geophysics

Rodevich, V. M.
REFERENCE BOOK ON THE WATER RESOURCES OF THE USSR, VOLUME XVI: THE LENA-YENISEI REGION, CHAP. 3, CHARACTERISTICS OF THE MAIN WATER UNITS, tr. by B. M. K. 11 Feb 63 [439]p. (figs. refs. omitted). H-9953-A.
Order from OTS or SLA $22.25 63-15900

Trans. of mono. Spravochnik po Vodnyim Resursam SSSR, v. 16, Leno-Eniseiskii Rayon, Leningrad, 1936, p. 153-584, 778-862.

DESCRIPTORS: *Handbooks, *Water supplies, *Hydrology, Sources, Terrain, *Rivers, *Lakes, Mountains, *Swamps, *Ice, Geology, Permafrost, Chemical analysis.

Shuleikin, V. V.
DEVELOPMENT OF SOVIET GEOPHYSICS [Puti Razvitaya Sovetskoi Geofiziki]. 1949 [10]p.
Order from OTS or SLA $1.10 62-19034

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Geograficheskaya i Geofizicheskaya [1948] v. 12, no. 4, p. 289-305.
Another trans. is available from SLA as RT-1203.

DESCRIPTORS: *Geophysics, *Scientific research, History.

Skorik, I. L.
UTILIZATION OF CERTAIN SUBSTANCES FOR THE ACCELERATION OF THE MELTING OF ICE (K Voprosu ob Ispol'zovanii Nekotorykh Veshchestv dlya Uskoreniya Razrusheniya L'da) tr. by V. N. Pavloff. 1963, 13p. NRCC Technical trans. 1067.
Order from NRCC $1.00 NRCC C-4375

Trans. of Arkticheskii i Antarkticheskii Nauchno-Issledovatel'skii Institut. Trudy (USSR) 1960, v. 218, p. 200-208.

DESCRIPTORS: *Ice, *Melting, Accelerators, Solar radiation, Dyes, Sand, Coal, Particles, *De-icing materials.

Climatology and Meteorology

COMMUNIST CHINA'S SCIENCE AND TECHNOLOGY: TRANSLATIONS NO. 33 (ARTICLES ON METEOROLOGY). 29 Apr 63, 13p. JPRS: 18945.
Order from OTS $0.50 63-21700

Trans. of K'o Hsüeh Ta Chung (Chinese People's Republic) 1962, no. 11, p. 328-332.

DESCRIPTORS: *Scientific research, *China, *Meteorology, *Weather forecasting, *Climatology, Water privation, Floods.

Contents:
Storms can be forecast, by Wang Hsiang-hang
A discussion of climatic anomalies in terms of drought and flood in China, by Nai Chin.

POLISH METEOROLOGY: BIBLIOGRAPHY 1955-61. 10 Jan 62 [38]p. 122 refs. AID Rept. 62-3.
Order from OTS or SLA $3.60 63-19732

DESCRIPTORS: *Meteorology, *Bibliographies, *Poland, Sounding rockets, Climatology, Meteorological instruments, Meteorological parameters, Scientific organizations, Aeronautics, Scientific personnel, Weather stations, Abstracts.

Bortnikov, S. A.
EXPERIENCE WITH SHORT RANGE WEATHER PREDICTION ON THE BASIS OF THE SOLUTION OF A COMPLETE SYSTEM OF THERMOHYDRODYNAMIC EQUATIONS (Opyt Kratkosrochnogo Prognoza Pogody na Osnove Resheniya Polei Sistemy Uravnenii Termogidrodinamiki) tr. by Irene A. Donehoo. Apr 63, 10p. 2 refs. WB/T-96.
Order from OTS $0.50 63-11612

Trans. of Meteorologiya i Gidrologiya (USSR) 1962, no. 11, p. 12-19.

DESCRIPTORS: *Weather forecasting, *Equations of state, Equations of motion, *Correlation techniques, Meteorology, Partial differential equations, Thermodynamics, Hydrodynamics.

This article is devoted to an experience with short range weather prediction based on the solution of the entire system of equations for a two level model.

Dmitriev, A. A.
THE ARTIFICIAL CONTROL OF THE CLIMATE OF LARGE AND SMALL AREAS (BASED ON EXPERIENCE IN THE COASTAL AREA OF THE ISSYK-KUL LAKE). 13 May 63, 14p. 5 refs. JPRS: 19145.
Order from OTS $0.50 63-21801

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Geograficheskaya, 1963, no. 1, p. 45-49.

DESCRIPTORS: *Climatology, Control, Convection, Wind, Temperature.

Kats, A. L. and Pavlovskaya, A. A.
AIR EXCHANGE IN THE TROPICAL ZONE AND ITS RELATIONSHIP TO THE GENERAL CIRCULATION OF THE ATMOSPHERE [AND] THE TEMPERATURE FIELD IN A SYSTEM OF DEVELOPING PRESSURE FORMATIONS IN THE LOWER STRATOSPHERE IN WINTER. 22 Apr 63, 29p. (fig. omitted) 32 refs. JPRS: 18830.
Order from OTS $1.00 63-21635

Trans. of Meteorologiya i Gidrologiya (USSR) 1963, no. 2, p. 3-14, 21-29.

DESCRIPTORS: *Atmospheric motion, Wind, Tropical regions, *Atmospheric temperature, *Stratosphere, Meteorology, *Climatology.

Yudin, M. I.
RELATIONSHIPS BETWEEN THE ELEMENTS OF LARGE-SCALE ATMOSPHERIC MOTIONS AND CERTAIN PROGNOSTIC CONSEQUENCES (Sootnosheniya Elementov Krupnomashtabnykh Atmosfernykh Dvizhenii i Nekotorye Prognosticheskie Sledstviya) tr. by Irene A. Donehoo. Feb 63, 36p. 9 refs. WB/T-94.
Order from OTS $1.00 63-11610

Trans. of mono. Koordinatsionnaya Komissiya po Chislennym Metodam Prognoza [Materials of the Conference of the Coordinating Commission on Numerical Forecast Methods]. Materialy Soveshchaniya, Leningrad, 1961, p. 5-24.

DESCRIPTORS: *Atmospheric motion, *Meteorological parameters, *Equations of motion, *Correlation techniques, Mathematical analysis, Meteorology, Weather forecasting.

A linearized system of equations on the dynamics of the atmosphere is examined in this article. The relationships of spectral components of the basic meteorological elements are found as well as the motions on a vertical scale depending on the magnitudes of horizontal scale, of the parameter of stability, characteristic speed and latitude. The relationships between components in the equations for the dynamics of the atmosphere are evaluated. Conditions are shown whereby there occurs a rearrangement of meteorological fields in connection with rapid wave motions. (Author)

Geodesy

Gan'shin, V. N.
SOVIET STUDY OF ARBITRARY NORMAL SECTION ON ROTATION ELLIPSOID. 16 Apr 63 [16]p. 4 refs. JPRS: 18704.
Order from OTS $0.50 63-21577

Trans. of #Izvestiya Vysshikh Uchebnykh Zavedenii. Geodeziya i Aerofotos"emka (USSR) 1962, no. 6, p. 9-16.

DESCRIPTORS: Geometric forms, *Ellipsoids, Bodies of revolution, Trigonometry, *Geodesics.

An investigation is made of the "arbitrary normal section", i.e. the section passing through two given points and normal in a certain third point. The given curve is a generalization of the usually considered mutually perpendicular sections and a central curve. The generalized formulas are found from which (as a particular case), the appropriate formulas are derived for the direct and converse normal sections, and also for the central curve. An arbitrary normal section can be used successfully in the solution of major geodetic problems.

Lenshin, V. T., Osipova, G. I., and Chuvaev, A. P.
THE RELATIONSHIP BETWEEN PRECIPITATIONS IN VARIOUS DISTRICTS OF THE LAKE SEVAN BASIN. [1962] 6p.
Order from ATS $9.25 ATS-20P65R

Trans. of Gl[avnaya] Geofiz[icheskaya] Obser[vatoriya, Leningrad]. Trudy (USSR) 1962, no. 126[188] p. 57-61.

DESCRIPTORS: *Atmospheric precipitation, *Lakes, Terrain, Geophysics.

Popov, Yu. V.
GEODETIC LIGHT RANGEFINDERS OF THE STATE OPTICAL INSTITUTE WITH INTERFERENCE AND DIFFRACTION LIGHT MODULATORS (Geodezicheskie Svetovye Dal'nomery Gosudarstvennogo Opticheskogo Instituta s Interferentsionnym i Diffraktsionnym Modulyatorami Sveta) tr. by H. H. 24 Apr 63, 14p. 7 refs. I-8123.
Order from OTS $0.50 63-11617

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Geodeziya i Aerofotos"emka (USSR) 1957, no. 2, p. 55-71.

DESCRIPTORS: Geodesics, *Optical equipment, *Range finding, Light, *Modulators, Interference, Diffraction, Design.

Geology

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 61 (GEOLOGY SERIES). 20 May 63, 14p. JPRS: 19272.
Order from OTS $0.50 63-21855

Trans. of selected abstracts from Referativnyi Zhurnal. Geologiya (USSR) 1963, nos. 2-3.

DESCRIPTORS: *Abstracts, *Geology, *China, Stratigraphy, Geologic age determination, Geochemistry, Minerals, Economic geology, Geophysical prospecting, Hydrology, Paleoecology, Seismic waves.

DESCRIPTION OF THE FAUNA IN THE ORDOVICIAN DEPOSITS ON THE WESTERN SLOPE OF THE CENTRAL URALS: INTRODUCTION AND GENERAL DESCRIPTION (Opisanie Fauny Otlozhenii Ordovika Zapadnogo Sklona Srednego Urala) tr. by Ivan Mittin. 1962 [13]p.
Order from OTS or SLA $1.60 63-13867

Trans. of Akademiya Nauk SSSR. Gorno-Geologicheskii Institut, Sverdlovsk. Trudy, 1955, no. 23, p. 3-8.

DESCRIPTORS: *Paleoecology, *Geologic age determination, Geology, Deposits, Animals.

RECENT DEVELOPMENTS IN GEOPHYSICS. 22 Apr 63, 146p. 96 refs. JPRS: 18819.
Order from OTS $2.75 63-21629

Trans. of Leningrad U. Uchenye Zapiski (USSR) 1962, no. 303, p. 3-15, 49-113, 118-134, 167-202, 222-225, 241-244, 278-287, 292-300.

DESCRIPTORS: *Geophysics, Terrestrial magnetism, Measurement, Proton counters, Magnetometers, Periodic variations, Mathematical analysis, Low frequency, Dipole moments, Bessel functions, Electromagnetic properties, Alternating current, *Geophysical prospecting, Polarization, Measuring devices (Electrical and Electronic), Seismic waves.

Contents:
Measuring the components of the earth's geomagnetic field by the proton resonance method, by V. D. Lomanyi and others
Using natural electromagnetic variations for investigation of the earth's upper layers, by M. N. Berdichevskii and others
Plotting magnetotelluric sounding curves according to recordings of short-period variations in the natural geomagnetic field, by A. V. Kovtun
Calculation of the low-frequency dipole field in the far zone, by L. B. Gasanenko and G. P. Sholpo
Some functions of the complex argument which appear in the low-frequency field theory, by L. B. Gasanenko and others
Approximate formula for a dipole field above a horizontal lamellar structure with a poorly conducting base, by L. B. Gasanenko
Directional electromagnetic sounding, by G. V. Molochnov
Comparison of the induction method with the dipole electromagnetic method on a thin conducting plate (model) by G. V. Molochnov and G. M. Grebennikov
Representation of observational data of alternating-current prospecting as an apparent specific resistance, by A. V. Veshev
The use of low-frequency alternating current in electrical profiling and sounding, by Yu. I. Bulgakov and A. V. Veshev
Methods of calculating a point-source field in the presence of a vertical bed, by N. A. Sakharnikov and D. M. Volkov
Influence of the earth-air boundary of the electrical field of a polarized sphere, by G. A. Tarasov
Low-frequency NCHMU equipment for prospecting, by D. R. Barkhatev
Concerning the vertical torsion balance theory, by B. V. Gran

Plotting wave-front charts with an arbitrary law of change in seismic velocity with depth, Yu. E. Nekrasov.

Belyakova, E. E., Reznikov, A. A. and others.
HYDROCHEMICAL METHOD OF PROSPECTING FOR ORE DEPOSITS. 7 May 63, 381p. 250 refs. JPRS: 19102.
Order from OTS $5.00 63-21784

Trans. of mono. Gidrokhimicheskii Metod Poiskov Rudnykh Mestorozhdenii v Aridnykh i Poluaridnykh Oblastyakh, Moscow, 1962, 267p.

DESCRIPTORS: *Geophysical prospecting, *Geochemistry, *Hydrology, *Economic geology, *Ores, Deposits, *Minerals, Migration area, Molybdenum, Tungsten, Beryllium, Copper, Lead, Zinc, Mapping, Salinity.

Contents:
Anomalies and norms for the distribution of elements in natural waters
The formation of natural waters in the arid regions
Hydrochemical signs of ore salination of some mineral formations
The Migration patterns of chemical elements in natural waters
Method of field and room investigations
Methods of interpreting hydrochemical data with the object of prospecting for ore deposits

Bogdanovich, A. K.
DISPOSITION EN MÉANDRES DES LOGES CHEZ QUELQUES NUBECULARIA ET IMPORTANCE SYSTÉMATIQUE DE CETTE PARTICULARITÉ (Meander Disposition of the Chambers of some Nubecularia and the Systematic Importance of this Feature) tr. by M. Sigal. 8p. 5 refs.
Order from OTS or ETC $0.80 63-26674

Trans. in French of Voprosy Mikropaleontologii (USSR) 1960, v. 3, p. 5-8.

DESCRIPTORS: *Foraminifera, USSR, *Paleoecology.

Bogdanovich, A. K.
UN NOUVEAU REPRÉSENTANT DES MILIOLIDAE A PAROI PERFORÉE (A new Representative of the Miliolidae with a Perforated Wall) tr. by M. Sigal. 9p. 3 refs.
Order from OTS or ETC $0.80 63-26676

Trans. in French of Voprosy Mikropaleontologii (USSR) 1960, v. 3, p. 17-20.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Fomenko, F. N.
ELECTRIC DRILLS FOR SINKING OIL AND GAS BOREHOLES: [SELECTED PARTS] tr. by H. D. 30 Apr 63, 20p. 30 refs. I-2450.
Order from OTS $0.50 63-11616

Partial trans. of mono. Elektrobury dlya Bureniya Neftyanykh i Gazovykh Skvazhin [v. 2] Moscow, 1961 [327p.]

DESCRIPTORS: *Drills, Electrical equipment, Design, *Well drilling, *Boreholes, *Petroleum industry, Oils, Natural gas.

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Captions to figures
Bibliography.

Fomina, E. V.
PROBLÈME DE LA LOCALISATION DES COMPLEXES DE FORAMINIFÈRES DE TOULA SUPÉRIEUR ET INFÉRIEUR DANS LES DIVERS FACIES CARBONATÉS DE L'HORIZON DE TOULA DU BASSIN DE MOSCOU (Problems of the Localisation of the Complexes of Foraminifera from the Upper and Lower Toula in the Different Carbonaceous Facies from the Toula Horizon of the Moscow Basin) tr. by M. Sigal. 23p. 17 refs.
Order from OTS or ETC $0.89 63-26683

Trans. in French of Voprosy Mikropaleontologii (USSR) 1960, v. 3, p. 72-82.

DESCRIPTORS: *Paleoecology, *Foraminifera, USSR.

Fursenko, A. V.
S. I. MIRONOV, NÉCROLOGIE (S. I. Mironov, Necrology) tr. by M. Sigal. 5p.
Order from OTS or ETC $0.80 63-26665

Trans. in French of Voprosy Mikropaleontologii (USSR) 1960, v. 3, p. 3-4.

DESCRIPTORS: *USSR, Geology, *Paleoecology, Petroleum.

Garaevskaya, L. S.
MAPS IN THE LARGE SOVIET ENCYCLOPEDIA. [1962] [15]p. ACIC LD-52.
Order from OTS or SLA $1.60 62-25421

Trans. of Sbornik Statei po Kartografii (USSR) 1954, v. 6, p. 17-23.

DESCRIPTORS: *Maps, Geography, Geology, Climatology, Political science, Dictionaries.

Godin, Yu. A. and Egorkin, A. V.
DER BAU DER ERDKRUSTE IM SUEDOSTEN DER RUSSISCHEN PLATTFORM NACH ANGABEN REGIONALER SEISMISCHER ARBEITEN. (The Crustal Architecture of the Earth-Crust from Data of Regional Seismic Work Done in the South-east of the Russian Platform).
Order from TIB $1.55

Trans. of Akademiya Nauk SSSR. Doklady, 1960, v. 135, no. 5, p. 1123-1126.
Other translations are available in English from OTS or SLA $1.60 as 62-33490, VESIAC-2295 [1962] [11]p. and from AGI $8.00.

DESCRIPTORS: *Earth, Data, Seismological stations, *Geology, *Seismic waves, Geophysics.

Golev, B. T.
PRÉPARATION ET COLORATION DES COQUILLES DE NUMMULITES (Preparation and Coloration of the Tests of Nummulites) tr. by M. Sigal. 7p. 3 refs.
Order from OTS or ETC $0.80 63-26685

Trans. in French of Voprosy Mikropaleontologii (USSR) 1960, v. 3, p. 132-135.

DESCRIPTORS: *Paleoecology, *Foraminifera, Microscopy, Preparation, Colors.

Golev, B. T. and Khloponin, K. L.
NOMENCLATURE ET CARACTÈRES DISTINCTIFS DE QUELQUES NUMMULITES A PILIERS (Nomenclature and Determinant Features of some Columned Nummelites) tr. by P. de St-Aubin. 33p. 23 refs.
Order from OTS or ETC $1.29 63-26672

Trans. in French of Voprosy Mikropaleontologii (USSR) 1961, v. 4, p. 104-120.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Grigelis, A. A.
EPISTOMINOIDES PRIMAEVUS SP. NOV., PREMIERE DÉCOUVERTE DU GENRE EPISTOMINOIDES DANS L'OXFORDIEN INFÉRIEURE DE LITUANIE (Epistominoides Primaevus sp. Nov., First Find of the Genus Epistominoides in the Lower Oxfordian of Lithuania) tr. by M. Sigal. 10p. 15 refs.
Order from OTS or ETC $0.80 63-26682

Trans. in French of Voprosy Mikropaleontologii (USSR) 1960, v. 3, p. 67-71.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Ippolito, Felice.
CRITERIA OF INVESTIGATION FOR GEOTHERMAL ENERGY. 29 Nov 61, 25p. 87 refs.
Order from SLA $2.60 62-20299

Trans. of Naples U. Istituto de Geologia Applicata [e Arte Mineraria]. Memorie e Note (Italy) 1951, v. 4, p. 17-32.

DESCRIPTORS: *Geology, Heat, *Energy, Power, Steam, Water vapor, Volcanoes, *Stratigraphy, *Mining engineering, Geological surveys, Geophysical prospecting, Bibliographies,

Krasheninnikov, B. A.
MICROSTRUCTURE DU TEST DES DISCORBIDAE ET DES ROTALIDAE MIOCÈNES (Microstructure of the Test of the Miocene Discorbidae and the Miocene Rotalidae) tr. by M. Sigal. 17p. 14 refs.
Order from OTS or ETC $0.80 63-26680

Trans. in French of Voprosy Mikropaleontologii (USSR) 1960, v. 3, p. 41-49.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Krasheninnikov, V. A.
VARIATION DES ASSOCIATIONS DE FORAMINIFÈRES DANS LES RYTHMES DU MIOCÈNE DU SUD-OUEST DE LA PLATE-FORME RUSSE (Variation of the Associations of Foraminifera in the Rhythms of the Miocene from Southwest of the Russian Platform) tr. by P. de St-Aubin. 54p. 10 refs.
Order from OTS or ETC $1.92 63-26667

Trans. in French of Voprosy Mikropaleontologii (USSR) 1961, v. 4, p. 33-70.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Krasheninnikov, V. A. and Koevnikov, G. E.
PREMIÈRE DÉCOUVERTE DE REPRÉSENTANTS DU GENRE BOLIVINELLA DANS LE TERTIAIRE DE L'UNION SOVIÉTIQUE (First Find of Representatives of the Genus Bolivinella in the Tertiary of the USSR) tr. by P. de St-Aubin. 13p. 12 refs.
Order from OTS or ETC $0.80 63-26673

Trans. in French of Voprosy Mikropaleontologii (USSR) 1961, v. 4, p. 121-128.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Kuznetsova, K. I.
IMPORTANCE TAXONOMIQUE DE QUELQUES CARACTÈRES MORPHOLOGIQUES DES LENTICULINES JURASSIQUES (Taxonomic Importance of some Morphological Characteristics of the Jurassic Lenticulina) tr. by P. de St-Aubin. 25p. 21 refs.
Order from OTS or ETC $0.95 63-26670

Trans. in French of Voprosy Mikropaleontologii (USSR) 1961, v. 4, p. 89-101.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Kuznetsova, K. I.
SUR DES ANOMALIES DE COQUILLES DE LAGÉNIDES DU JURASSIQUE SUPÉRIEUR DE LA RÉGION DE LA VOLGA (On the Anomalics of the Tests of Lagenidae of the Upper Jurassic from the Volga Region) tr. by P. de St-Aubin. 6p. 2 refs.
Order from OTS or ETC $0.80 63-26671

Trans. in French of Voprosy Mikropaleontologii (USSR) 1961, v. 4, p. 102-103.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Nemkov, G. I.
LE DIMORPHISME CHEZ LES NUMMULITES (The Dimorphism of the Nummulites) tr. by M. Sigal. 31p. 64 refs.
Order from OTS or ETC $1.13 63-26681

Trans. in French of Voprosy Mikropaleontologii (USSR) 1960, v. 3, p. 50-66.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Pokornyi, V.
ÉCOLOGIE DES ASSOCIATIONS DE FORAMINIFÈRES "ARENACES" DU FLYSCH (Ecology of the Associations of Arenaceous Foraminifera from Flysch) tr. by M. Sigal. 14p. 27 refs.
Order from OTS or ETC $0.80 63-26675

Trans. in French of Voprosy Mikropaleontologii (USSR) 1960, v. 3, p. 10-16.

DESCRIPTORS: *Foraminifera, *Paleoecology.

Rauzer-Chernusova, D. M.
RÉVISION DES SCHWAGERINES ET DES GENRES VOISINS ET LIMITE DU CARBONIFÈRE ET DU PERMIEN (Revision of the Schwagerina and Related Genera and the Carboniferous-Permian Boundery) tr. by P. de St-Aubin. 50p. 62 refs.
Order from OTS or ETC $1.70 63-26666

Trans. in French of Voprosy Mikropaleontologii (USSR) 1961, v. 4, p. 3-32.

DESCRIPTORS: *Paleoecologie, *Foraminifera.

Serova, M. Ya.
LES MILIOLIDES DES DÉPÔTS PALÉOGÈNES DE LA DÉPRESSION ARAL-TURGAI (The Milioidae from the Paleogene Deposits of the Aral-Turgai Depression) tr. by M. Sigal. 86p. 38 refs.
Order from OTS or ETC $2.78 63-26684

Trans. in French of Voprosy Mikropaleontologii (USSR) 1960, v. 3, p. 83-130.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Serova, M. Ya.
ONTOGÉNESE ET DÉVELOPPEMENT PHYLOGÉNÉTIQUE DU GENRE HAUERINA (Ontogenesis and Phylogenetic Development of the Genus Hauerina) tr. by M. Sigal. 16p. 8 refs.
Order from OTS or ETC $0.80 63-26677

Trans. in French of Voprosy Mikropaleontologii (USSR) 1960, v. 3, p. 22-30.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Suleimanov, I. S.
PHYLOGÉNIE DE LA SÉRIE GAUDRYINA-GAUDRYINELLA (Phylogeny of the Gaudryina-Gaudryinella Series) tr. by P. de St-Aubin. 11p. 4 refs.
Order from OTS or ETC $0.80 63-26669

Trans. in French of Voprosy Mikropaleontologii (USSR) 1961, v. 4, p. 83-88.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Suleimanov, I. S.
STRUCTURE DU TEST DE QUELQUES ESPÈCES DE TEXTULARIIDAE EN RAPPORT AVEC LEUR PALÉOÉCOLOGIE (Structure of the Test of some Species of Textulariidae in Relation to their Paleoecology) tr. by M. Sigal. 8p. 1 ref.
Order from OTS or ETC $0.80 63-26679

Trans. in French of Voprosy Mikropaleontologii (USSR) 1960, v. 3, p. 37-40.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Venglinskii, I. V.
STRUCTURE DE LA PAROI DU TEST CHEZ CERTAINS FORAMINIFÈRES AGGLUTINANTS (Structure of the Wall of the Test of some Agglutinating Foraminifera) tr. by M. Sigal. 9p. 5 refs.
Order from OTS or ETC $0.80 63-26678

Trans. in French of Voprosy Mikropaleontologii (USSR) 1960, v. 3, p. 31-36.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Volarovich, M. P. and Bayuk, E. I.
DER EINFLUSS EINES ALLSEITIGEN DRUCKS VON 4000 kg/cm^2 AUF DIE ELASTISCHEN EIGENSCHAFTEN VON GESTEINSPROBEN (Influence of All-Round Pressures up to 4000 kg/cm^2 Upon the Elastic Properties of Rock Specimens).
Order from TIB $1.55

Trans. of Akademiya Nauk SSSR. Doklady, 1960, v. 135, no. 1, p. 65-68.
Other translations are available in English from OTS or SLA $1.10 as 61-18598 [1961] 5p. and from AGI $8.00.

DESCRIPTORS: *Pressure, *Elasticity, Physical properties, Rock.

Volozhanina, P. P.
RAPPORT ENTRE LES FUSULINIDAE ET LES FACIES DE LA COUPE DU CARBONIFÈRE MOYEN DU TIMAN MÉRIDIONAL (Relation between the Fusilinidae and the Facies of the Section of the Middle Carboniferous from Southern Timan) tr. by P. de St-Aubin. 22p. 9 refs.
Order from OTS or ETC $0.86 63-26668

Trans. in French of Voprosy Mikropaleontologii (USSR) 1961, v. 4, p. 71-82.

DESCRIPTORS: *Paleoecology, *Foraminifera.

Mineralogy

Keyser, W. L. de.
CONTRIBUTIONS TO THE STUDY OF KAOLIN AND CLAY. [1963] [14]p. 49 refs.
Available from SLA on loan 63-16289

Trans. of Natuurwetenschappelijk Tijdschrift (Belgium) 1937, v. 19, p. 91-105.

DESCRIPTORS: *Clays, Soils, Dehydration, Temperature, *Calorimetry, Test equipment, Belgium

Rateev, M. A.
DIE GESETZMÄSSIGKEITEN DER RÄUMLICHEN VERBREITUNG VON KAOLINIT IN MARINEN SEDIMENTEN (Regularities in Spatial Distribution of Kaolinite in Marine Sediments). 10p.
Order from TIB $1.80

Trans. in German of Akademiya Nauk SSSR. Doklady, 1961, v. 141 no. 5, p. 1200-1203.

DESCRIPTORS: *Sedimentation, Clay, *Clay minerals.

Simonyants, L. E. and Zhlobinskii, B. A.
FATIGUE FAILURE OF ROCKS. [1963] 4p.
Order from ATS $6.50 ATS-26Q69R

Trans. of Izv[estiya] Vysshikh Uchebn[ykh] Zavedenii. Neft' i Gaz (USSR) 1962, v. 5, no. 2, p. 15-18.

DESCRIPTORS: *Fatigue (Mechanics), *Failure (Mechanics), *Rock (Geology).

Oceanography

OCEANOGRAPHY, 1963, VOL. 3, NO. 1: [SELECTED] TRANSLATIONS. 7 May 63, 16p. JPRS: 19070.
Order from OTS $0.50 63-21758

Trans. of Okeanologiya (USSR) 1963, v. 3, no. 1, p. 123-126, 175-178, 182-184.

DESCRIPTORS: *Oceanology, Radioactivity, Aquatic animals, *Norwegian Sea, Ocean bottom sampling, Scientific organizations, Oceanographic data, Atlantic Ocean.

Contents:
Radioactivity of some bottom organisms in the Norwegian Sea, by A. F. Federov and V. P. Kilezhenko
Scientific Conference on the results of Oceanographic investigations of the Atlantic Ocean, Kaliningrad, Oct 62, by K. A. Sedykh
Intergovernmental Oceanographic Commission: session no. 2.

Beklemishov, K. V.
THE INFLUENCE OF THE CONSUMPTION OF DIATOMS BY COPEPODS ON THE NUMERICAL FLUCTUATION OF THE FORMER, BASED ON FAR EASTERN SEAS. [1962] [8]p. 23 refs. [DSIR] NLL M 8864.
Order from OTS or SLA $1.10 62-32834

Trans. of [Akademiya Nauk SSSR. Institut Okeanologii. Trudy] 1955, v. 13, p. 77-82.

DESCRIPTORS: Marine biology, Plankton, *Algae, *Crustacea, Oceanography, Organic substances, Food, Aquatic animals, Ecology.

Maksimov, I. V.
A STUDY OF THE WESTERN COASTAL ANTARCTIC CURRENT (K Izucheniyu Sapadnogo Pribrezhnogo Antarkticheskogo Techeniya) tr. by M. Slessers. 1962 [7]p. HO Trans-168.
Order from OTS or SLA $1.10 63-13866

Trans. of Sovetskaya Antarkticheskaya Ekspeditsiya. Informatsionnyi Byulleten' (USSR) 1958, no. 2, p. 31-35.

DESCRIPTORS: *Ocean currents, *Antarctic regions, Oceanographic vessels, Measurement, Oceanographic data.

The study of water movement along the Antarctic coast is based on measurements made by the drifting diesel-electric ship "Ob'" in 1956/57. The coastal belt extends from Princess Ragnhild Coast to Queen Mary Land and it is illustrated by a current chart.

Muratov, M. and Bogorov, V.
THE SEA REVEALS ITS MYSTERIES. 9 Apr 63 [6]p. JPRS: 18612.
Order from OTS $0.50 63-21540

Trans. from Pravda [Moscow] (USSR) 1963, 19 Feb, p. 4.

DESCRIPTORS: *Hydraulic research, *Hydrodynamics, Beaches, Ocean waves, *Oceanology, Marine geophysics, Sea water.

A popularized account concerning the investigations of V. P. Zenkovich on coastal and shallow-water shifting phenomena.

Neprochnov, Yu. P. and Lunarskii, G. N.
APPLICATION OF SEISMO-ACOUSTIC RADIOBUOYS FOR STUDYING THE EARTH'S CRUSTAL STRUCTURE IN THE AREA OF THE INDIAN OCEAN. 28 Mar 63 [26]p. 16 refs. JPRS: 18425.
Order from OTS $0.75 63-21453

Trans. of Okeanologiya (USSR) 1963, v. 3, no. 1, p. 76-87.

DESCRIPTORS: *Marine geology, Ocean bottom topography, *Radio sono buoys, Measuring devices (Electrical and Electron), *Seismic waves, Design, Measurement, *Indian Ocean, Geology.

Nesis, K. N. and Zevina, G. B.
CORALS AND SEA PENS, INDICATORS OF THE HYDROLOGICAL PROFILE [AND] CASPIAN FOULING AND ITS CHANGES IN THE PAST TEN YEARS (1951-61). 23 Apr 63, 39p. 77 refs. JPRS: 18849.
Order from OTS $1.25 63-21646

Trans. of Okeanologiya (USSR) 1962, v. 2, no. 4, p. 705-726.

DESCRIPTORS: *Ocean bottom topography, *Marine geology, *Marine Biology, *Caspian Sea, Fouling, Oceanology, *Coral reefs, Aquatic animals, Hydrology.

Ryzhkov, Yu. G. and Karnaushenko, N. N.
MEASUREMENT OF DEEP-LEVEL CURRENTS IN THE BLACK SEA BY AN ULTRASONIC BUOY OF NEUTRAL BUOYANCY. [1962] [3]p. 5 refs. [DSIR] NLL M 8915.
Order from OTS or SLA $1.10 63-15172

Trans. of A[kademiya] N[auk] SSSR. Doklady [1961] v. 141, no. 1, p. 74-76.

DESCRIPTORS: Measurement, Underwater, *Ocean currents, *Black Sea, *Buoys, *Ultrasonic equipment, Oceanology.

Tsyplukhin, V. F. and Sergeev, V. A.
INSTRUMENTAL STUDY OF ATTENUATION OF WAVES WITH DEPTH. [1962] [6]p. 3 refs. [DSIR] NLL M. 8922.
Order from OTS or SLA $1.10 63-15177

Trans. of Okeanologiya (USSR) 1962, v. 2, no. 1, p. 134-138.

DESCRIPTORS: *Attenuation, *Ocean waves, Buoys, Oceanographic vessels, Oceanology.

Vel'mozhnaya, Yu. A.
ON THE PROSPECTS OF USING THE INTERFEROMETER FOR THE DETERMINATION OF SALINITY OF SEA WATER (O Vozmozhnosti Primeneniya Interferometra dlya Opredeleniya Solenosti Morskoi Vody) tr. by M. Slessers. 1962 [12]p. 10 refs. HO Trans-158.
Order from OTS or SLA $1.60 62-33573

Trans. of Akademiya Nauk SSSR. Morskii Gidrofizicheskii Institut. Trudy, 1960, v. 22, p. 26-32.

DESCRIPTORS: *Interferometers, *Salinity, *Sea water, Oceans, Calibration, Volumetric analysis, Refraction.

The small Soviet produced interferometer ITR-2 (weight 15 kg), which is based on the German model designed by the Optics Department of the Institute of Physics and Technique, is outlined, describing its operation and analyzing the degree of accuracy in determining the salinity of sea water. The readings of the instrument are compared with titration results so as to determine the most accurate calibration standard for salinity measurements in oceans and seas. The advantages of the instrument, such as the simplicity of operation (even at sea state 5), the accessibility, compactness and ruggedness of the instrument are pointed out, as well as the need for additional experiments to raise the accuracy of measurements beyond that of titration. (Author)

Yashnov, V. A.
WATER MASSES AND PLANKTON. I. SPECIES OF CALANUS FINMARCHICUS s. l. AS INDICATORS OF DEFINITE WATER MASSES, tr. by N. F. C. Owen. Nov 61 [21]p. 32 refs. [DSIR] NLL M. 8860.
Order from OTS or SLA $2.60 62-32830

Trans. of Zoologicheskii Zhurnal (USSR) [1961] v. 40, no. 9, p. 1314-1334.

DESCRIPTORS: *Crustacea, Marine biology, *Plankton, Distribution, Oceanography, Arctic regions, Atlantic Ocean, Ecology, Ocean currents.

In the present article works on the systematics and ecology of the species Calanus finmarchicus s. l., the distribution of three close species C. helgolandicus, C. finmarchicus s. str. and C. glacialis is considered in relation to the distribution of water masses in the Atlantic ocean and adjacent seas. Each of the above species is closely connected in its distribution with the distribution of definite water masses. These species may be considered as indicators of the water masses even in those cases when with mingling of waters of various origins the particular characteristics of the foreign water cannot be ascertained by the usual methods of physico-chemical analysis. (Author)

Physics of the Atmosphere

Burkard, O.
STUDY ON THE GEOMAGNETIC EFFECT OF THE F_2 LAYER. [1962] [13]p. 5 refs.
Order from SLA $1.60 62-14060

Trans. of Zeitschrift für Geophysik (West Germany) 1954, v. 20, p. 75-83.

DESCRIPTORS: *Terrestrial magnetism, *Ionosphere, *Geophysics, Magnetic properties, Analysis.

The influence of the earthmagnetic field on the world-wide distribution of the critical frequencies foF_2 is examined especially for solstices by means of observations in 1952. At solstice as at equinox both maxima in geomagnetic latitudes of about $\pm 20^{\circ}$ and intermediate minimum upon the geomagnetic equator are absent in the early forenoon. The highest critical frequencies are appearing upon the magnetic equator. At noon the minimum is to be found about inclination zero; the two maxima are situated unsymmetrically to that. The maximum of the actual summer-hemisphere is situated more towards the pole. A secondary maximum appearing at noon during December-solstice at an inclination of about +60 degrees is not real. This secondary maximum is pretended by accidental distribution of observatories and also by the fact, that there is no whatever dependence from earthmagnetic field for it at this time. It disappears, if the critical frequencies are set in dependence from geographical latitude. The regions, inwhich a suitable condensation of the observatory-net could essentially contribute to the clearing of geomagnetic effect, are demarcated. The International Geophysical Year 1957/58 would be able in a prominent

measure to bid the foundation for such a passing condensation and could help in this way to solve the still uncleared problems of the geomagnetic effect by international cooperation. (Author)

Mashkovich, S. A.
ON THE THEORY OF PRESSURE WAVES IN A BAROCLINIC ATMOSPHERE (K Teorii Voln Davleniya v Baroklinnoi Atmosfere) tr. by Irene A. Donehoo. Mar 63, 26p. 5 refs. WB/T-95.
Order from OTS $0.75 63-11611

Trans. of Tsentral'nyi Institut Prognozov. Trudy (USSR) 1961, v. 111, p. 13-28.

DESCRIPTORS: *Atmospheric motion, Stability, *Barometric pressure, Atmosphere, Stratification, Atmospheric models, *Meteorological parameters, Mathematical analysis.

The development of waves imposed on the baroclinic zonal flow is investigated. The problem is solved with a numerical method for four and ten-level atmospheric models. The results obtained are used for investigating the stability of motion, for determining the character of wave evolution with a different vertical structure of a disturbance at an initial moment, and for the evaluation of transformation of energy. The calculated results demonstrate the relationship between the stability of waves of different magnitudes on the vertical velocity profile of the basic flow and the stratification of the atmosphere. A determination of differences in the development of turbulence, is also obtained, which were initially localized in different layers of the atmosphere. For example, the propagation of the disturbances is more intense in the upper layers than in the lower layers. The waves situated initially in the upper portion of the troposphere are the most unstable. (Author)

Niikısk, Khel'gi.
COMPUTING ATMOSPHERIC INFRA-RED RADIATIVE FLUXES (K Voprosu o Raschetakh Teplovogo Izlucheniya Atmosfery). [1963] [98]p. (foreign text included) 19 refs.
Order from OTS or SLA $8.60 63-10937

Trans. of [Issledovaniya po Fizike Atmosfery] (Estonian SSR) 1960, v. 2, p. 67-114.

DESCRIPTORS: *Infrared radiation, *Thermal radiation, Fluxes, *Atmosphere, Troposphere, Temperature, *Heat transfer, Maps, Functions, *Correlation techniques.

At the present time three methods are available for computing radiative fluxes in the atmosphere: theoretical formulas, empirical formulas and graphical methods. Inasmuch as empirical formulas are representative only for average atmospheric conditions and since computations based upon theoretical formulas are subject to computational complications, many investigators have attempted to discover graphic methods for the computation of radiative fluxes of the atmosphere which would simplify the computations and simultaneously interpret accurately the actual atmospheric conditions. These graphic methods are known as radiation charts. Inasmuch as a whole series of radiation charts based on various principles are already available, it would be desirable to compare them with each other and also to investigate them in some detail. Investigation of these charts will uncover the causes for divergence between results and hence it will become possible to evaluate to a certain degree the advantages and disadvantages of the different charts. This is the basic objective of this investigation. On the basis of mean meteorological data for the various zones of the terrestrial sphere, an attempt is made to establish standard values for changes in fluxes of thermal radiation for various latitudes and their vertical distribution in the troposphere. (Author)

Seismology

Loeb, J.
ATTENUATION OF SEISMIC WAVES THROUGH SOLIDS (Attenuation des Ondes Sismiques dans les Solides). 29 Jan 62 [23]p. (foreign text included).
Order from SLA $2.60 63-10281

Trans. of Geophysical Prospecting (Netherlands) 1961, v. 9, p. 370-381.

DESCRIPTORS: *Attenuation, *Seismic waves, Solids, Absorption, Sound.

Ryabinkin, L. A.
USE OF REPRODUCIBLE PHOTORECORDS IN SEISMIC PROSPECTING. [1962] 16p. 18 refs.
Order from OTS or SLA $1.60 63-10304

Trans. of Institut Neftekhimicheskoi i Gazovoi Promyshlennosti. Trudy (USSR) 1959, v. 24, p. 95-106.

DESCRIPTORS: *Geophysical prospecting, *Seismic waves, Seismographs, *Records, Reproduction, *Photographic recording systems, Frequency, Analysis.

Ryabinkin, L. A. and Znamenskii, V. V.
NEW DATA ON THE RECORDING OF MULTIPLE WAVES IN SEISMIC PROSPECTING. [1962] 16p. 15 refs.
Order from OTS or SLA $1.60 63-10283

Trans. of [Institut Neftekhimicheskoi i Gazovoi Promyshlennosti]. Trudy (USSR) 1957, v. 18, p. 157-167 (pub. in abridged form in Akademiya Nauk SSSR. Izvestiya. Ser[iya] Geofiz[icheskaya] 1956, no. 11).

DESCRIPTORS: *Geophysical prospecting, *Seismic waves, Reflection, Refraction, Multipath transmission, Propagation, Seismographs, Wave analysis.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 177 (ELECTRONICS, ENGINEERING, AND SPACE RESEARCH SERIES). 16 May 63, 7p. JPRS: 19215.
Order from OTS $0.50 63-21826

Abstract trans. of Meres es Automatika (Hungary) 1963, v. 11, no. 2, p. 33-64; no. 3, p. 65-103.

DESCRIPTORS: *Abstracts, Bibliographies, *Electronics, *Engineering, Space flight, *Automation, *Display systems, *Radiation measurement devices, *Telemetering systems, *Switching circuits, Infrared spectrophotometers, Prosthetics, Membranes.

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 55 (MINING SERIES). 16 Apr 63 [6]p. JPRS: 18733.
Order from OTS $0.50 63-21591

Trans. of selected abstracts from Referativnyi Zhurnal. Gornoe Delo (USSR) 1962, nos. 11-12.

DESCRIPTORS: *Abstracts, *China, Mining engineering, Economic geology, Oils, Gases, Deposits, Minerals, Flotation (Separation)

Baum, V. A. and Sakr, I.
MASS TRANSFER IN TURBULENT FLOW THROUGH THE ORIFICE OF A CHAMBER. 17 Apr 63, 12p. 3 refs. JPRS: 18756.
Order from OTS $0.50 63-21599

Trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Energetika i Avtomatika, 1962, no. 3 [p. 114-121].

DESCRIPTORS: *Fluid flow, *Turbulence, Orifices, *Solar furnaces.

Belikov, V.
A ROCKET CARRIER GOES TO THE FIRING RANGE. 1 Feb 63 [7]p. FTD-TT-63-97; AD-298 211.
Order from OTS or SLA $1.10 63-15782

Unedited rough draft trans. from Izvestiya (USSR) 1962, no. 239(14093) 7 Oct, p. 6.

DESCRIPTORS: *Military training, Guided missiles (Air to Surface), Jet planes, Rockets.

An article describing a training flight of a Russian military jet plane and the firing of an air to surface guided missile.

Kolesnikov, A.
GOLD-MINING ON CHUKOTKA. USSR Industrial Development: Soviet Nonferrous Metallurgy no. 56. 25 Mar 63 [6]p. JPRS: 18352.
Order from OTS $0.50 63-21421

Trans. from Czerwony Sztandar (USSR) 1963, no. 37, 13 Feb, p. 1.

DESCRIPTORS: *Gold, *Mining engineering.

Krebs, Erich.
THE TELEVISION-BORE-HOLE-PROBE FB 400: A NEW INSTRUMENT FOR THE INVESTIGATION OF BORE-HOLES. [1962] 25p. (3 figs. omitted).
Order from SLA $2.60 63-10221

Trans. of Erdöl und Kohle-Erdgas-Petrochemie (West Germany) 1961, v. 14 [no. 1] p. 11-17.

DESCRIPTORS: *Mining engineering, *Television equipment, Geological survey, Geophysical prospecting, *Well logging, *Boreholes.

With a new television bore-hole-probe, whose outer diameter is 63 mm, one can obtain by direct measurement graphical and photographic records of bore-holes. Currently, this method is successful at a depth of 400 meters. The system of television transmission and the components of the apparatus layout are described and presented pictorially in this report. The graphical description of the probe findings are demonstrated by an example from practice. (Author)

Ryabchikov, P.
SOBRE PROYECTOS DE BUQUES (O Proektirovanii Sudov) (Ship Design). 6p. CID: 62-132.
Order from OTS, ETC or CID $0.85 62-26781

Trans. in Spanish of Morskoi Flot (USSR) 1955 [v. 15] no. 3, p. 19-20.

DESCRIPTORS: Design, *Ships (Nonmilitary).

Tiraspolsky, W.
SINCE TURBO-DRILLING (Depuis le Turbo-Forage). [1962] [38]p. (foreign text included).
Order from SLA $3.60 62-18521

Trans. of Association Française des Techniciens du Pétrole. Bulletin, 1956 [no. 118] p. 291-310.

DESCRIPTORS: *Well drilling, Petroleum industry, Turbines, Drills, Industrial research, Mining engineering.

Trebin, F. A., Borisov, Yu. P., and Mukharskii, [E.] D.
DETERMINATION OF THE FORMATION-PARAMETERS FROM THE PRESSURE BUILDUP CURVE, TAKING INTO ACCOUNT THE FLOW OF LIQUID INTO THE WELL AFTER SHUT-IN, PT. 1 [K Opredeleniyu Parametrov Plasta po Krivym Vosstanovleniya Davleniya s Uchetom Paritoka Zhidkosti v Skvazhinu Posle Ee Zakrytiya]. [1962] [20]p. 10 refs.
Order from OTS or SLA $1.60 62-16659

Trans. of Neftyanoe Khozyaistvo (USSR) 1958 [v. 36] no. 8, p. 38-46.
Another trans. is available from ATS $9.95 as ATS-35K27R [1958] 12p.

DESCRIPTORS: *Petroleum, Sources, Hydraulic reservoirs, Fluid flow, Pressure, Permeability, Mathematical analysis, Hydrodynamics, Mining engineering.

Trebin, F. A., Borisov, Yu. P., and Mukharskii, [E.] D.
DETERMINATION OF THE FORMATION-PARAMETERS FROM THE PRESSURE BUILDUP CURVE, TAKING INTO ACCOUNT THE FLOW OF LIQUID INTO THE WELL AFTER SHUT-IN, PT. II. [K Opredeleniya Parametrov Plasta po Krivym Vosstanovleniya Davleniya s Uchetom Pritoka Zhidkosti v Skvazhinu Posle Ee Zakrytiya]. [1962] 13p.
Order from OTS or SLA $1.60 62-16660

Trans. of Neftyanoe Khozyaistvo (USSR) 1958 [v. 36] no. 9, p. 40-47.

DESCRIPTORS: *Petroleum, Sources, Hydraulic reservoirs, Fluid flow, Pressure, Permeability, Mathematical analysis, Hydrodynamics, Mining engineering.

Aeronautical Engineering

PROCESS FOR THE PRODUCTION OF A POLYACRYLONITRILE SOLUTION. [1962] 16p. (figs. omitted).
Order from OTS or SLA $1.60 63-10142

Trans. of Belgian patent 601,347, by Toho Rayon Kabushiki Kaisha Company, by proxy: A. van Er-Haeghen, (priority for a pat appl. claimed in Japan 16 Mar 60, under 8,274/60).

DESCRIPTORS: *Acrylonitriles, *Polymerization, *Polymers, Solutions, Catalysts, Zinc compounds, Chlorides, Hydrogen compounds, Peroxides, *Manufacturing methods, Acrylonitrile polymers.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 69. 15 May 63, 60p. JPRS: 19207.
Order from OTS $1.75 63-21818

Trans. of Referativnyi Sbornik. Ekonomika Promyshlennosti (USSR) 1963, no. 1, p. 119-120; Avtomobil'nyi Transport (USSR) 1962 [v. 40] no. 11, p. 16-18, 38-41; Narodnoe Khozyaistvo Uzbekistana (USSR) 1963 [v. 5] no. 1, p. 12-19; and selected articles from Feb 63 issues of 6 Russian newspapers.

DESCRIPTORS: *Industrial production, *Chemical industry, *Chemical engineering, *Industrial plants, Construction, *Plastics, Chromium compounds, *Drugs, Biological products, Burns, Therapy, *Tires, Design, *Polyethylene plastics, *Growth substances.

Contents:
Building the Gaurdak chemical industry center, by G. Vasil'eva
The present and future of chemical industry in Moskovskaya oblast, by S. Chesnokov
Modernizing the Moscow synthetic products and materials combine, by G. Zokhin
Trouble in building the Aktyubinsk chromium compounds plant, by G. Gukasov
Obstacles to producing a new fir-balsam drug, by N. Bakhtyukov
Chemical industry in the Priokskii economic region, by I. Lisichkin and A. Podol'skii
Changes in the raw materials base of chemical industry, by Z. K.
Prolonging the service life of tires, by A. Sheinin and N. Korneichev
New tire designs: "R" and RS", by I. Abolina and V. Prashohikin
Develop the chemical industry of Uzbekistan on a large scale, by I. Abaev and A. Dul'man
The uses of polyfluoroethylene resin
The great possibilities of new synthetics
Newsbriefs concerning plastics
A new crop and livestock growth stimulant.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 70. 22 May 63, 41p. (figs. omitted). JPRS: 19318.
Order from OTS $1.25 63-21876

Trans. from Kazakhstanskaya Pravda (USSR) 1963, 25 Jan; Sovetskaya Rossiya (USSR) 1963, no. 21, 25 Jan; Pravda Ukrainy (USSR) 1963, 25 Jan; Trud, Moscow (USSR) 1963, 20 Jan; Sovetskaya Belorussiya (USSR) 1963, 25 Jan, p. 2; Ekonomicheskaya Gazeta (USSR) 1963, no. 4(77) 26 Jan, p. 32-36.

DESCRIPTORS: *Industrial production, *Chemical industry, *Chemical engineering, *Industrial plants, Construction, Polyethylene plastics, *Polymers, Chlorocarbons, Fertilizers, Styrene plastics, *Scientific personnel, Materials, *Fibers (Synthetic).

Contents:
Lagging construction of the polyethylene plant in Gur'ev, by P. Kofman and K. Bekesheva
Polymers are the vanguard of progress, by M. Rokhlin
Lagging construction of organochlorine shops at the Dneprodzerhinsk nitrogen fertilizer plant, by S. Akhmatov
Lagging construction of the polystyrene shops at the Gorlovka nitrogen fertilizer plant, by G. D'yakov and others
Lack of specialists for production leadership, by A. Tikhonov
For more and better chemical materials for the light industry, by A. Serkov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 72. 23 May 63, 48p.
JPRS: 19362.
Order from OTS $1.75 63-21899

Trans. of Partiinaya Zhizn' (USSR) 1962, no. 3, p. 27-33; #Voprosy Ekonomiki (USSR) 1963, no. 1, p. 10-16; and 8 selected articles from Jan-Feb 63 issues of 5 Russian newspapers.

DESCRIPTORS: *Industrial production, *Chemical industry, Chemical engineering, *Personnel, *Labor, *Automation, *Glass textiles, *Plastics, Composite materials, Herbicides, *Toluidines, Production, *Wastes (Industrial), Color film, *Industrial plants, Construction, Tires, *Industrial research, Synthetic rubber, Polymers.

Contents:
Technical and personnel problems in industry, by I. Berezovskii
Ways to increase labor productivity in the chemical industry, by N. Fedorenko and others
Green light for glass plastics, by B. L'vov and M. Slotintsev
Lagging construction of herbicide shop at the Zhdanovskii by-product coke plant, by A. Krulevetskii
Production of metaloluidine from wastes, by A. Belokon'
Lack of coordination at the Dneprodzerzhinsk nitrogen fertilizer plant, by A. Yalovoi
Need for laboratory experiments at the Moscow tire plant, by G. Korbe
Lagging construction of the Kuibyshev synthetic rubber plant, by P. Levchenko
Increasing polymer output by the Fergana hydrolytic plant, by N. Semanov
Specialization and utilization of reserves in the tire industry, by K. Gorlin and others.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL INDUSTRY NO. 73. 27 May 63, 42p.
JPRS: 19431.
Order from OTS $1.25 63-21929

Trans. of Sakharnaya Promyshlennost' (USSR) 1963 [v. 37] no. 2, p. 22-23; na Stroikakh Rossii (USSR) 1963, no. 1, p. 3-7; and 7 selected articles from Feb 62 issues of 5 Russian newspapers.

DESCRIPTORS: *Industrial production, *Chemical industry, *Chemical engineering, Earth, *Silicon compounds, Dioxides, Chlorine, *Fertilizers, *Industrial plants, Polymers, *Plastics industry, Synthetic rubber, Economics.

Contents:
Treatment of Kieselguhr in chlorine atmosphere, by I. G. Bogdan
Expediting the expansion of the Gorlovka nitrogenous fertilizers plant, by L. Fedotov
Expedite the expansion of the polymer industry
Expediting the construction of the Stavropol' synthetic rubber plant, by P. Levchenkov
Expanding the Lisichansk chemical enterprises, by A. Cherepakhin
Expedite the expansion of the Gorznyi chemical plant, by P. Nazarov
Chemical industry in the Volga region, by I. Polonskaya
Modernizing the Erevan synthetic rubber plant, by A. Krichevskii and I. Svitin
Troubles with modernizing the Simferopol' plastic products plants, by V. Avtonomov
Utilize efficiently the capital investments in chemical industry in Tul'skaya oblast, by Ya. Chukseev
How the Novomoskovsk chemical combine was modernized, by D. Dobromyslov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL MACHINE BUILDING NO. 22. 10 May 63, 20p.
JPRS: 19142.
Order from OTS $0.75 63-21800

Trans. from Ekonomicheskaya Gazeta (USSR) 1963, no. 10[83] 9 Mar, p. 3-7; Trud, Moscow (USSR) 1963, 7 Feb.

DESCRIPTORS: *Industrial production, *Chemical engineering, *Machines, *Industrial plants, Construction, Industrial equipment, Industrial procurement.

Contents:
Increase in capacity of chemical machine building plants
Kurgan chemical equipment plant, by V. Vernikov.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CHEMICAL MACHINE BUILDING NO. 23. 17 May 63, 15p. JPRS: 19250.
Order from OTS $0.50 63-21843

Trans. of Khimicheskoe Mashinostroenie (USSR) 1963 [v. 5] no. 2, p. 3-4 and 44-46.

DESCRIPTORS: *Industrial production, Chemical engineering, *Machines, *Hydraulic systems, *Liquid filters, Rubber, *Centrifuges, *Pipes, *Non-destructive testing, Ultrasonic radiation, Corrosive liquids, *Containers, Pipelines, *Pumps, *Heat exchangers.

Contents:
Rubberized sheet filter LV-100G, by S. G. Ayrapetov
New machines, devices and instruments.

Belikova, N. A., Vol'fson, L. G. and others.
SOBRE LA OBTENCION DE LA ALDRINA Y DILDRINA (O Poluchenii Al'drina i Dil'drina) (Obtention of Aldrine and Dieldrine). 20p. 23 refs. CID: 62-187.
Order from OTS, ETC or CID $1.40 62-26836

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1960 [v. 33] no. 2, p. 454-463.

DESCRIPTORS: *Insecticides, Production.

Berger, G.
PROCESS FOR THE PRODUCTION OF ALCOHOLS FROM OLEFINES. May 63, 500 words.
Order from TTIS $4.50 TTIS NS 74

Trans. of East German patent 24,196, appl. 24 May 60, pub. 9 Nov 62.

DESCRIPTORS: Synthesis (Chemistry), *Alcohols, *Ethylenes.

Butkov, N. A., Rabinovich, E. I., and Kalpinskii, T. P.
PYROLYSIS OF SURAKHAN PARAFFIN MAZOUT. [1962] 23p.
Order from OTS or SLA $2.60 63-10364

Trans. of Neft[yanoe] Khoz[yaistvo] (USSR) 1933, v. 25, no. 6, p. 29-35.

DESCRIPTORS: *Petroleum, Methanes, Hydrocarbons, Pyrolysis.

Ershov, P. N., and Sharanova, T. E.
METHOD OF SEPARATION OF 1-ANTHRAQUINONE SULFONIC ACID, tr. by L. H. 20 Dec 62, 3p.
Order from OTS or SLA $1.10 63-13758

Trans. of USSR author's certificate of addition 122,747 (to 119,876), cl. 12c, 23/01, appl. 21 Feb 59 (pub. in #Byulleten' Izobretenni (USSR) 1959, no. 19).

DESCRIPTORS: *Anthraquinone, *Sulfonic acids, Separation.

Gryazev, N. N., Rakhovskaya, S. M., and Shulepova, L. P.
ACTIVACION DE ALGUNAS TIERRAS DE BLANQUEO DE LA REGION DEL VOLGA (Aktivatsiya Nekotorykh Otbelivayushchikh Zemel'Povolzh'ya) (Activation of Some Fuller's Earths from the Volga Region). 25p. 13 refs. CID: 62-154.
Order from OTS, ETC or CID $1.60 62-26803

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1956, v. 29, no. 7, p. 1006-1017.

DESCRIPTORS: *Catalysis, *Porous materials.

Haward, Robert Nobbs and Boultbee, Thomas Holbech.
PROCESS FOR STABILIZING POLYOLEFINS OR MIXED POLYMERIZATES FROM LOW-MOLECULAR WEIGHT OLEFINS. 7 Nov 62, 9p. 1 ref.
Order from OTS or SLA $1.10 63-10838

Trans. of German patent 1,065,170, cl. 39b, 22/06, by Petrochemical Ltd., London, appl. 18 Jan 57, pub. and issued 10 Sep 59.

DESCRIPTORS: Stabilization, *Polymerization, Polymers, *Ethylenes, Low-pressure research, Additives, Phosphites, Molecular weight.

Holzmann, E. and Pilat, St.
PRODUCTION OF HIGHER ALCOHOLS FROM PETROLEUM HYDROCARBONS, PT. III. 28 Jan 32, 13p. 27 refs.
Order from SLA $1.60 63-10435

Trans. of Przemysl Chemiczny (Poland) 1929, v. 13, p. 455-460.

DESCRIPTORS: *Alcohols, Separation, Petroleum, Hydrocarbons, *Gasoline, Sulfuric acid, Acetic acids, *Esters, Alkyl radicals, Sulfates, Ethylenes, Production.

See also 63-10434

Hugel, G.
EXPERIMENTAL STUDY OF THE CRACKING OF PURE HYDROCARBONS. 10 Sep 37, 10p. (figs. omitted) 1 ref.
Order from SLA $1.10 63-10493

Trans. of mono. World Power Conference (no. 2) Berlin, 1930. Transactions, v. 8, p. 56-71.

DESCRIPTORS: *Petroleum, *Hydrocarbons, Decomposition, Temperature, Pressure.

Kargin, V.
CRUCIAL SHORTAGES IN LOW-TONNAGE CHEMISTRY. 24 Apr 63, 5p. JPRS: 18883.
Order from OTS $0.50 63-21666

Trans. from Pravda, Moscow (USSR) 1963, 15 Mar, p. 2.

DESCRIPTORS: *Chemical industry, *Industrial production, Chemical compounds.

Korchinskii, A. V. and Zakharov, A. N.
AUTOMATIZACION EN LA INDUSTRIA DEL AMONIACO (Avtomatizatsiya Ammiachnogo Proizvodstva) (Automation in the Ammonia Industry). 13p. CID:62-134.
Order from OTS, ETC or CID $1.10 62-26783

Trans. in Spanish of Mekhanizatsiya i Avtomatizatsiya Proizvodstva (USSR) 1961 [v. 15] no. 3, p. 10-14.

DESCRIPTORS: *Automation, Industrial production, *Ammonia.

Kozlov, V. N. and Smolenskii, B. I.
PROCESO DE SEPARACION DEL ACIDO ACETICO DE SUS SOLUCIONES ACUOSAS, POR EL METODO DE EXTRACCION (Protsess Izvlecheniya Uksusnoi Kisloty iz Ee Vodnykh Rastvorov Metodom Ekstraktsii) (Extraction Process of Acetic Acid From its Aqueous Solutions). 22p. 2 refs. CID: 62-150.
Order from OTS, ETC or CID $1.55 62-26799

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1958 [v. 31] no. 6, p. 924-931.

DESCRIPTORS: Solutions, *Acetic acids, Separation, Solvent extraction.

Mashovets, V. P.
PROBLEMS OF CALCIUM MANUFACTURE. [1963] 14p.
Order from K-H $14.00 K-H 6048 c

Trans. of Tsvetnye Metally (USSR) 1938 [v. 13] no. 6, p. 92-98.

DESCRIPTORS: *Calcium, Manufacturing methods.

Pechkovskii, V. V., Amirova, S. A. and Parkacheva, V. V.
SOBRE LA EXTRACCION DE LOS COMPONENTES VALIOSOS DE LA PIRITA DE FLOTACION POR TOSTACION SULFATANTE (Ob Izvlechenii Tsennykh Komponentov Flotatsionnogo Kolchedana Putem Sul'fatizi-ruyushchego Obzhiga) (Extraction of the Valuable Components of Flotation Pyrites by Sulphurising Oxydation) 18p. 8 refs. CID: 62-179.
Order from OTS, ETC or CID $1.30 62-26828

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1958 [v. 31] no. 10, p. 1466-1471.

DESCRIPTORS: *Pyrites, Separation, Sulfuration, Heat treatment, Flotation, Oxidation.

Pilat, St. and Winkler, J.
PRODUCTION OF HIGHER ALCOHOLS FROM PETROLEUM HYDROCARBONS, PT. I. 14 Jan 32 [18]p. (figs. omitted) 12 refs.
Order from SLA $1.60 63-10433

Trans. of Przemysl Chemiczny (Poland) 1929, v. 13, p. 185-195.

DESCRIPTORS: *Alcohols, Production, *Petroleum, Hydrocarbons, Decomposition, Temperature, *Ethylenes, Gasoline.

The optimum temperature for the production of olefinic gases which can be utilized for manufacturing secondary alcohols by cracking gas oil in the vapor phase is between 600° to 670°. For this temperature interval a maximum yield of 5-1/2%, figured on the gas oil charged, is obtained. It was possible to obtain isopropyl, secondary butyl, and secondary amyl alcohols from the mixture of alcohols obtained, though the products were not absolutely pure. It was found that the optimum temperature for alcohol yields is also the optimum for gasoline yield.

Pilat, St., Piotrowski, W. J., and Winkler, J.
PRODUCTION OF HIGHER ALCOHOLS FROM PETROLEUM HYDROCARBONS, PT. II. 28 Jan 32, 20p. (figs. refs. omitted).
Order from SLA $1.60 63-10434

Trans. of Przemysl Chemiczny (Poland) 1929, v. 13, 5 May, p. 209-220.

DESCRIPTORS: *Alcohols, Production, Petroleum, Hydrocarbons, *Gases, Propenes, Ethylenes, Separation, Gasoline, Sulfur, Dehyration, Sulfuric acid.

See also 63-10433

Platonov, N.
WHEN A PLAN TURNS INTO A PLAIN PIECE OF PAPER. USSR Industrial Development: Soviet Chemical Machine Building no. 19. 19 Apr 63 [10]p. JPRS:18793.
Order from OTS $0.50 63-21615

Trans. of Narodnoe Khozyaistvo Uzbekistana (USSR) 1963 [v. 5] no. 3, p. 64-68.

DESCRIPTORS: *Industrial production, *Chemical engineering, *Machines, Construction, Economics, Industrial plants.

Ruhemann, M. and Zinn, N.
THE SYSTEM HYDROGEN-NITROGEN-CARBON MONOXIDE AND THE WASHING OUT OF CARBON MONOXIDE. [1962] 26p. 10 refs.
Order from SLA $2.60 62-18766

Trans. of Phys[ikal ische] Zeit[schrift der] Sowjet[union] (Germany) 1937, v. 12, p. 389-403. Another trans. is available from ATS as RJ182, 13p.

DESCRIPTORS: *Liquified gases, *Hydrogen, *Nitrogen *Carbon compounds, Monoxides, Purification, Phase studies, *Towers (Chemistry), Rectifiers.

p-x diagrams for the binary systems hydrogen-carbon monoxide and hydrogen-nitrogen were plotted at 90°, 83° and 78°K, over the range 12 to 50 atmospheres. The equilibrium curves of the system hydrogen-nitrogen-carbon monoxide were determined, at 90°, 83° and 78° K, and at 12, 20, 26, 35 and 50 atmospheres. A calculation is made of the minimum amount of liquid nitrogen required for washing out the carbon monoxide from H_2-N_2-CO mixtures. The theoretical number of plates for a H_2-N_2-CO wash column, under given external conditions, is calculated. The role of actual rectification in the processes taking place in the wash column is discussed. (Author)

Ryabenko, A., Lyaporov, N. and others.
POLYMERS AND MACHINES; CHEMICAL GIANT OF NORTHERN CAUCASUS; COURSE: TOWARDS THE ACCELERATED DEVELOPMENT OF CHEMISTRY. 25 Apr 63, 6p. (figs. omitted). JPRS: 18903.
Order from OTS $0.50 63-21675

Trans. from Pravda, Moscow (USSR) 1963, 27 Feb and 18 Mar.

DESCRIPTORS: *Polymers, *Plastics, Construction, *Machines, *Chemical industry, Industrial plants, Industrial production.

Ryklis, S. G. and Shein, S. M.
SOBRE EL PROCESO CONTINUO DE CONDENSACION DEL CLORAL CON CLOROBENCENO (O Nepreryvnom Protsesse Kondensatsii Khloralya s Khlorbenzolom) (Continuous Separation Process of Chloral from Phenyl Chloride). 13p. 6 refs. CID: 62-153.
Order from OTS, ETC or CID $1.10 62-26802

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1958 [v. 31] no. 7, p. 1114-1118.

DESCRIPTORS: *Condensation reactions, Chlorides, Benzenes, Phenyl radicals.

Schildknecht, H., Maas, K., and Kraus, W.
EXTREMELY PURE ORGANIC SUBSTANCES BY CONTINUOUS COLUMN CRYSTALLIZATION AND ZONE MELTING. [1962] 21p. (refs. omitted).
Order from SLA $2.60 63-10904

Trans. of Chemie-Ingenieur-Technik (West Germany) 1962, v. 34, no. 10, p. 697-701.

DESCRIPTORS: Organic compounds, *Benzenes, *Phenanthrines, Purification, *Crystallization, *Zone melting, Towers (Chemistry).

With benzene as example, it is shown that column crystallization is superior to distillation for the preparation of pure liquids. Solid, crystallizing crude products, e.g. phenanthrene, can also be purified in this manner, using closed columns in a continuous process. Highest purity is subsequently achieved by means of directed crystallization procedures such as 'normal solidification' and zone melting. (Author)

Seailles, Jean-Charles.
PROCESS FOR THE PURIFICATION OF MAGNESIUM. [1962] 6p. 1 ref.
Order from OTS or SLA $1.10 62-16244

Trans. of first addition to French patent 975,099, gr. 14 -- cl. 1, no. 55466, by Société Française d'Études et d'Entreprises, appl. 16 Mar 42, granted 30 Jan 52, pub. 30 June 52 (main pat. received 30 Jan 42).

DESCRIPTORS: *Magnesium, *Purification, *Pyrolysis, Magnesium compounds, Calcium compounds, Oxides, *Manufacturing methods, Chemical precipitation.

(See also 62-16260)

Seailles, Jean-Charles.
PROCESS FOR THE PURIFICATION OF MAGNESIUM. [1962] 8p.
Order from OTS or SLA $1.10 62-16260

Trans. of French patent 975,099, gr. 14 --cl. 1, by Société Française d'Études et d'Entreprises, appl. 30 Jan 42, granted 11 Oct 50.

DESCRIPTORS: *Magnesium, *Purification, *Pyrolysis, Magnesium compounds, Calcium compounds, Oxides, *Manufacturing methods, Chemical precipitation.

Shushunov, V. A. and Pavlov, A. M.
SINTESIS DE LA CIANAMIDA POTASICA: SODICA Y CALCICA (Sintez Tsianamida Kaliya, Natriya i Kal'tsiya) (Synthesis of Potassium, Sodium and Calcium Cyanamides). 11p. 8 refs. CID: 62-184.
Order from OTS, ETC or CID $1.05 62-26833

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1955 [v. 28] no. 1, p. 98-100.

DESCRIPTORS: Synthesis, *Cyanamides, *Potassium compounds, *Sodium compounds, *Calcium compounds.

Teichert, A., Leszczynski, Z., and Radoniewicz, H.
SYNTHESIS OF PHENOL AND ACETONE BY THE CUMENE METHOD. V. DECOMPOSITION OF CUMENE HYDROPEROXIDE INTO PHENOL AND ACETONE (Synteza Fenolu i Acetonu Metoda Kumenowa. V. Rozklad Wodoronadtlenku Kumenu na Fenol i Aceton) tr. by J. Burchart. 1963 [15]p. 16 refs. PL-480 Agr.
Order from OTS $0.50 61-31283

Trans. of Przemysl Chemiczny (Poland) 1958, v. 14(37) no. 2, p. 98-102.

DESCRIPTORS: *Phenols, *Acetones, Synthesis (Chemistry), *Cumenes, *Hydroperoxides, Decomposition, *Catalysts, *Ion exchange resins, Towers (Chemistry)

Experiments in a static system showed that among the cation exchange resins examined, Wofatit P was the strongest catalyst for the decomposition process and Cationite SFA was the weakest. The rate of the decomposition of the hydroperoxide in the presence of Wofatit P depends on the manner of preparation of this resin. The highest values were obtained in the cases of Wofatit poor in water (about 3 percent) and swollen in acetone. The yield of phenol in the decomposition of the hydroperoxide in the presence of Wofatit P is 95 percent of theoretical. Wofatit P was found to be a very stable catalyst of the decomposition of cumene hydroperoxide. It functioned without regeneration for more than 100 hrs which corresponds to 150 g of decomposed hydroperoxide per 1 g of Wofatit P. Although after regeneration the exchange capacity of this catalyst decreased by some 60 percent, the decrease did not affect the catalytic properties of Wofatit. On the basis of the results obtained in a static system, it can be assumed that the decomposition process in a continuous system will operate most effectively if the process advances uniformly throughout the height of the column. This can be achieved by proper control of temperature of the process and of concentration of cumene hydroperoxide solution. (Author) (See also 59-19650)

Ugryumov, P. S.
OBTENCION DE ALCOHOLES INDIVIDUALES A PARTIR DE LA GRASA DE CACHALOTE (Poluchenie Individual'nikh Spirtov iz Kashalotovogo Zhira) (Obtention of Individual Alcohols from Sperm Whale Fat) 16p. 6 refs. CID: 62-183.
Order from OTS, ETC or CID $1.25 62-26832

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1959 [v. 32] no. 10, p. 2324-2329.

DESCRIPTORS: *Alcohols, Production, *Fats, *Cetacea.

Ugryumov, V. D.
TO THE QUESTION OF PRODUCING PYROCATECHOL AND PYROGALLOL FROM WOOD TARS. [1962] 4p. (figs. omitted).
Order from OTS or SLA $1.10 63-10699

Trans. of Lesokhimicheskaya Promysh[lennost'] (USSR) 1933, v. 2, no. 3, p. 11-15.

DESCRIPTORS: *Tar, *Pyrocatechol, *Pyrogallol, Production.

Ulsperger, E.
SURFACE ACTIVE SUGAR AMIDES. May 63.
Order from TTIS $5.40 TTIS NS 79

Trans. of East German patent 24,239, appl. 4 Feb 59, pub. 9 Nov 62.

DESCRIPTORS: *Surface-active substances, *Amides, Glucose, Lactones, Amines, Cyanates, Alkyl radicals, Water, Solubility, Hydroxides, *Cleaning compounds, *Textiles.

Usov, Yu. N., Skvortsova, E. V. and others.
PYROLYSIS OF PROPANE AND OF n-BUTANE IN PRESENCE OF ORGANIC SUBSTANCES AS ADDITIVES. [1963] 4p. 5 refs.
Order from OTS or SLA $1.10 63-14327

Trans. of #Zhur[nal] Priklad[noi] Khim[ii] (USSR) 1961, v. 34, p. 943-946.

DESCRIPTORS: *Propanes, *Butanes, *Hydrocarbons, *Pyrolysis, *Additives, Organic materials, Decomposition, Tests

Vondracek, R. and Dostal, J.
SEPARATION OF HYDROCARBONS WITH THE AID OF PHENOL. [1962] 11p. 27 refs.
Order from SLA $1.60 63-10441

Trans. of Chem[icke] Listy (Czechoslovakia) 1937, v. 31, p. 15-20.

DESCRIPTORS: Benzenes, Fractionation, Hydrocarbons, *Napthenes, *Cyclohexanes, *Pentanes, *Hexanes, *Heptanes, Separation, Organic solvents, *Phenols

A study was made using phenol plus water for separating hydrocarbons from benzene fractions in the 60-110°C. range. During these studies it was found that phenol with 5% H_2O worked best. The method is as follows: A number of close boiling fractions (2°C.) are arranged in a series so that the fraction with the lowest density becomes the first member of the series and the cut with the highest becomes the last. For the extraction, a given quantity of phenol taken is run through each cut one after the other. Extraction of the series is continued until the volume of the first member is reduced by 1/2, and then is set aside. The following member now becomes the first of the series, etc. Both the extracted and unextracted portions are recovered from the phenol, distilled and the cuts made. Phenol extraction is repeated again. With the method described herein, isolation of practically pure naphthenes is possible, also recovery of paraffins from cyclic compounds. The method requires a great deal of extraction and therefore is quite lengthy. Results of test where large quantities of hydrocarbon were isolated are given. (Author)

Yamashita, Chiaki; Asami, Akiharu and Kuriyama, Sutezo.
AIR OXIDATION OF SP WASTE SOLUTION. [1962] 12p. (figs. tables omitted) 7 refs.
Order from SLA $1.60 63-10754

Trans. of Kogya Kagaku Zasshi (Japan) 1961, v. 64, no. 11, p. 2014-2017.

DESCRIPTORS: Air, Oxidation, Industrial production, Chemical reactions, Organic compounds, Lignin, Wood pulp, *Sulfate pulp, *Wastes (Industrial).

The conditions were examined for manufacturing vanillin from the SP waste solution on an industrial scale by using air as an oxidation agent. It was found that it is possible to manufacture vanillin by using air at just about the same yield as when oxygen is used and that, when the SP waste solution is oxidized in the presence of a large amount of air at high temperature and under high pressure, vanillin can be manufactured from lignin quickly but that vanillin which has been produced will be quickly decomposed, thus extremely shortening the time during which vanillin can be obtained at the highest yield, and that, therefore, there are many difficulties in obtaining a sufficiently high yield in the industrial production of vanillin. Various factors were examined for the purpose of making it easy to produce it on an industrial scale. (Author)

Zhadanovskii, N. B.
TESTS ON OPERATING A UNIT FOR PREPARING HYDROGEN BY THE CATALYTIC CONVERSION OF HYDROCARBON GASES WITH STEAM. [1962] 8p.
Order from OTS or SLA $1.10 63-10400

Trans. of Khim[iya] i Tekhnol[ogiya] Topliv i Masel (USSR) 1958, v. 3, no. 8, p. 38-44.
Another trans. is available from ATS $10.50 as ATS-57K27R [1958] 8p.

DESCRIPTORS: *Hydrogen, *Hydrocarbons, Gases, *Catalysts, Chemical properties, *Steam, Reaction kinetics, Synthesis (Chemistry)

Civil Engineering

Halabi, Abdul-Karim.
SYSTEMATIC EXPERIMENTAL RESEARCH ON THE TENSILE STRENGTH OF CONCRETE. [1962] [21]p. (4 figs. omitted).
Order from SLA $2.60 63-10197

Trans. of Revue des Materiaux de Construction et de Travaux Publics. [Edition C] (France) 1962, no. 561, p. 168-180.

DESCRIPTORS: *Concrete, Tensile properties, Reinforced concrete, Tests, Reinforcing materials.

The aim of the study was to raise the tensile strength of concrete. Computations take the potential tensile strength as zero, thus leading to specifying a greater sectional area, particularly for RC and prestressed concrete, hence a higher cost. Moreover, the cracks in concrete, due to inadequate tensile strength, lower the overall strength of the work, for water gets in and attacks the rodding.

Huet, J.
CONTRIBUTION TO THE EXPERIMENTAL STUDY OF THE RHEOLOGICAL PROPERTIES OF FILLER-BITUMEN MIXTURES II. SHEAR, TENSILE AND COMPRESSION TESTS AND INFLUENCE OF THE PROPERTIES OF THE BINDER (Contribution a l'Etude Experimentale des Propriétés Rheologiques des Mélanges Filler-Bitume. II. Essais de Cisaillement, de Traction, de Compression et Influence des Propriétés du Liant). [1962] [23]p. (foreign text included) (some figs. refs. omitted).
Order from SLA $2.60 63-10051

Partial trans. of Centre de Recherches Routières. Rapport de Recherche (Belgium) 1962, no. 103, p. 1-2, 6-9, 42-43, 45-47.

DESCRIPTORS: *Bitumens, *Igneous rock, Asphalt, Pavements, Deformation, Shear stresses, Tensile properties, Compressive properties, Binders.

The report deals with the establishment of the rheological behavior of bitumen-filler mixtures examined in simple shear, tensile and static compression at long loading times. The measurements have been carried out with mixtures containing different bitumens but the same filler (porphyry) at 25°C. It was shown that a relation exists between the viscous component of this rheological behavior and (1) the fundamental properties of the bitumen represented by the initial viscosity coefficient η_0 and (2) the physico-chemical characteristics of the binder. This relationship shows the influence of the asphaltene content (fractionation by n-heptane) and the percentage of elementary sulfur of bitumens. The results are theoretically interpreted in terms of qualitative molecular theories of flow for concentrated solutions of polymer chains. (Author)

Kurenkov, A. F.
THERMAL STRESSES IN REINFORCED CONCRETE SHAFTS (Eksperimental'naya Proverka Metoda Rascheta Temperaturnikh Usilii v Stvole Zhelezobetonnikh Dimovikh Trub) tr. by G. L. Cairns. Sep 60 [29]p. 7 refs. Library Communication no. 994; [DSIR NLL] M.3202.
Order from OTS or SLA $2.60 62-24615

Trans. of mono. Issledovaniya po Zharoupornim Betonu i Zhelezobetonu (Investigations of Heat-Resistant Concrete and Reinforced Concrete) ed. by V. I. Murashev, Moscow, 1954, p. 167-202.

DESCRIPTORS: *Reinforced concrete, *Thermal stresses, *Shafts, Mathematical analysis, *Structures Heat resistant materials.

Mehmel, A.
A RATIONAL LIMITATION OF DEFLECTIONS IN REINFORCED CONCRETE MEMBERS (Über Eine Sinnvolle Beschränkung der Durchbiegungen von Stahlbetonbauteilen) tr. by D. A. Sinclair. 1963, 24p. 11 refs. NRCC Technical trans. 1069.
Order from NRCC $1.50 NRCC C-4342

Trans. of der Bauingenieur (West Germany) 1961, v. 36, no. 8, p. 293-300.

DESCRIPTORS: *Reinforced concrete, *Loading (Mechanics), Mathematical analysis, Structures, Reinforcing materials, Deformation, Stresses, *Structural parts, Beams (Structural).

Radkevich, B. L.
SHRINKAGE AND CREEP OF EXPANDED CLAY-CONCRETE UNITS IN COMPRESSION (Usadka i Polzuchest' Szhatykh Keramzitobetonnykh Elementov) tr. by B. Ribush. [1962] [18]p. (foreign text included) 3 refs. [CSIRO] Trans. 5910.
Order from OTS or SLA $1.60 63-13597

Trans. of Beton i Zhelezobeton (USSR) 1961, no. 8, p. 364-369.

DESCRIPTORS: *Clay, *Concrete, *Structures, Compressive properties, Deformation, Reinforced concrete, *Creep.

Results are given of experiments on shrinkage and creep of reinforced and non-reinforced prisms made of expanded clay-concrete and standard concrete grade 150 and 200. (Author)

Utescher, G.
TESTS TO FAILURE ON CONNEXIONS BETWEEN PRECAST AND IN SITU CONCRETE MEMBERS. [1962] [13]p. 1 ref.
Order from SLA $1.60 62-18783

Trans. of Beton und Stahlbetonbau (Germany) 1961, v. 56, no. 2, p. 32-37.

DESCRIPTORS: Test methods, *Concrete, Casting, Supports, Stresses, *Failure (Mechanics), *Bonded joints, *Construction.

Some tests are described which were made for the purpose of obtaining information on the ultimate strength of structural joints between precast and in situ concrete members. The test specimens were made on the construction site with the normal amount of care exercised under such conditions. In all cases the safety against cracking and against failure was quite as good as could have been expected from entirely in situ forms of construction. (Author)

Electrical and Electronic Engineering

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 67 (ELECTRONICS AND POWER ENGINEERING SERIES). 28 May 63, 2p. JPRS: 19456.
Order from OTS $0.50 63-21937

Trans. of selected abstracts from Referativnyi Zhurnal. Elektrotekhnika i Energetika (USSR) 1963, no. 24.

DESCRIPTORS: *Abstracts, *China, *Electronics, *Power equipment, *Arc welding, Welding fluxes, *Electrostatic precipitation.

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 68 (AUTOMATION AND RADIOELECTRONICS SERIES). 28 May 63, 2p. JPRS: 19457.
Order from OTS $0.50 63-21938

Trans. of selected abstracts from Referativnyi Zhurnal. Avtomatika i Radioelektronika (USSR) 1962, no. 11.

DESCRIPTORS: *Abstracts, *China, *Automation, *Electronics, *Semiconductors, Electromagnetic waves, *Television receivers.

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 69 (AUTOMATION AND RADIOELECTRONICS SERIES). 28 May 63, 14p. JPRS: 19458.
Order from OTS $0.50 63-21939

Trans. of selected abstracts from Referativnyi Zhurnal. Avtomatika i Radioelektronika (USSR) 1962, nos. 1, 2, 5, 8, 12.

DESCRIPTORS: *Abstracts, *China, *Automation, *Electronics, *Ultrasonic properties, Photoemission, *Radio transmitters, High frequency, *Radio astronomy, *Automation, *Rocket research, *Waveguides, *Resonators, *Semiconductors, Oscillation, Theory, *Radio receivers.

Biberman, L. and Panin, B.
MEASUREMENT OF THE PARAMETERS OF A HIGH-FREQUENCY ELECTRODELESS DISCHARGE BY MEANS OF TWO PROBES. [1963] [10]p. 4 refs.
Order from OTS or SLA $1.10 63-14664

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1951, v. 21, no. 1, p. 12-17.
Other translations are available from SLA as R-962, 9p. and R-1428, 16p.

DESCRIPTORS: Electric discharges, Discharge tubes, Measurement, High frequency.

A method of measuring the parameters of a high-frequency electrodeless discharge consisting of the reading of the voltampere characteristics with two identical probes is described. The temperature and concentration of the electrons are determined from the results of processing these characteristics. (Author)

Damianovich, Horacio.
CONTRIBUTION TO THE STUDY OF CATHODIC SPUTTERING. 9 Oct 61, 11p. 2 refs.
Order from SLA $1.60 63-10136

Trans. of [Universidad Nacional del Litoral]. Inst[ituto de] Invest[igaciones] Cient[ificas y] Techn[ologicas]. Anales (Argentina) 1934, v. 3/4, p. 23-31.

DESCRIPTORS: *Cathodes, *Electrodes, Microstructure, Electric discharges, *Platinum, *Helium, Oxygen, Nitrogen, Hydrogen, *Lead.

Dyja, Ryszard.
BIOGRAPHY OF A MASER-RESEARCH SCIENTIST. 1 Apr 63 [7]p. (fig. omitted). JPRS: 18464.
Order from OTS $0.50 63-21464

Trans. of Zolnierz Polski, 1963, no. 8(769) p. 16-17.

DESCRIPTORS: *Biographies, Scientific personnel, *Masers, *Engineering personnel, Poland

A biographical sketch of Major Zbigniew Puzewicz, with emphasis on his work in maser development at the Polish Military Engineering Academy.

Hayashi, Toshiya.
A NEW TYPE OF FIELD EFFECT TRANSISTOR. [1962] 21p. 12 refs.
Order from SLA $2.60 62-20180

Trans. of [Denki Tsushin Gakkai Zasshi] (Japan) 1960, v. 43, no. 3, p. 298-305.

DESCRIPTORS: *Transistors, Ultrasonic radiation, Theory, Design.

This article proposes a new type of easy-to-make field effect transistor, and describes its structure, theory of design, method of production, the basic characteristics of a trial model, its advantages and uses. The structure of this type is characterized in that grooves are set very close to the junction part in the P or N layer of a growth-type PN junction, thus forming thin layers between the other layers. These are the channels of the field effect transistor. In addition, the relation between the geometrical shape of this transistor and its electrical characteristics is analyzed, and the basic design is sketched. Moreover, the actual production and the concrete design are discussed in detail, and the static characteristics of several trial models are given. Finally, it is predicted that this transistor will be used advantageously as an element in an "on" and "off" switch, and as a current limiter. (Author)

Ivanov, V. D.
CORRECCION DE DEFECTOS EN EL TENDIDO DE CABLES PARA MAQUINARIA ACCIONADA ELECTRICAMENTE UTILIZADA EN EMPRESAS TURBERAS (Bunkernyi Kabeleukladchik) (Defect Correction in the Stringing of Cables for Electric Powered Machines Employed in the Peat Industry). 10p. CID: 62-135.
Order from OTS, ETC or CID $1. 62-26784

Trans. in Spanish of Torfyanaya Promyshlennost' (USSR) 1956 [v. 33] no. 6, p. 12-14.

DESCRIPTORS: *Cables, Installation, *Electrical machinery, *Peat, Industrial production, Electric cables.

Kharychev, A. I.
BANCO DE PRUEBAS PARA MOTORES ELECTRICOS (Stend dlya ispytaniya elektrodvigatelei) (Electric Motor Test Bench). 7p. CID: 62-174.
Order from OTS, ETC or CID $0.80 62-26823

Trans. in Spanish of Torfyanaya Promyshlennost' (USSR) 1957 [v. 34] no. 7, p. 35-36.

DESCRIPTORS: Test equipment, *Electric motors.

Kuchinskii, G. S. and Kaplan, D. A.
DIE ZULÄSSIGEN FELDSTÄRKEN FUER PAPIER-ÖL-ISOLATION VON GERATEN, DIE IN GLEICHSTROM-UEBERTRAGUNGSSYSTEMEN ARBEITEN (The Permissible Field Intensities for Paper-Oil-Insulation of Instruments Operating in Direct-Current Transmission Systems). 10p.
Order from TIB $1.80

Trans. in German of Elektrichestvo (USSR) 1961, no. 5, p. 64-68.

DESCRIPTORS: *Electric fields, *Intensity, Paper, Oils, *Instrumentation, *Direct current, Transmission lines, Electric insulation.

Kuhtenko, O. I.
THE CLASSIFICATION OF AUTOMATION SYSTEMS ACCORDING TO CONTROL PRINCIPLES. 25 Mar 63 [29]p. 12 refs. JPRS: 18307.
Order from OTS $0.75 63-21398

Trans. of Avtomatyka (USSR) 1962 [v. 7] no. 6, p. 69-78.

DESCRIPTORS: Automation, *Control systems, Classification, Dynamics, *Perturbation theory, Stability, Control, Theory.

Topics include: Equivalence of control principles; treatment of the problem on dynamic equivalence of various control systems; equivalence conditions; and, the equivalence of necessitated addends.

Lakits, E.
MEASUREMENT OF THE INTERACTION IMPEDANCE PRESENTED BY THE WIDE BAND COUPLING CIRCUIT OF A KLYSTRON (Mesure de l'Impedance d'Interaction Presentee par le Circuit de Couplage a Large Band d'un Klystron). [1962] [28]p. (foreign text included) 4 refs.
Order from SLA $2.60 62-10629

Trans. of Compagnie Française Thomson-Houston [sic] [Rapport]-R/211, May 61, 14p.

DESCRIPTORS: *Klystrons, Measurement, *Electrical impedance, Broadband, *Coupling circuits.

Mal'tseva, L. F. and Marmer, E. N.
DETERMINING ELECTRICAL PROPERTIES OF GRAPHITE AT HIGH TEMPERATURES. 14 Feb 63 [11]p. 2 refs. FTD-TT-62-1708. AD-401 730.
Order from OTS or SLA $1.60 63-19301

Unedited rough draft trans. of Poroshkovaya Metallurgiya (USSR) 1962 [v. 2] no. 1, p. 50-55.

DESCRIPTORS: *Graphite, Electrical properties, *High temperature research, *Resistance (Electrical)

Minina, O. M., Sershers, V. S., and Subbotina, G. V.
PROPORTIONAL-INTEGRIERENDE UND PROPORTIONAL-DIFFERENZIERENDE GLIEDER AUS RC-KREISEN MIT MAGNETISCHEN VERSTÄRKERN (Proportional-Integrating and Proportional-Differentiating Elements on RC-Nets with Magnetic Amplifiers). 13p.
Order from TIB $2.20

Trans. in German of Avtomatika i Telemekhanika (USSR) 1961, v. 22, no. 10, p. 1373-1385.

DESCRIPTORS: Integration, Circuits, Amplifiers, *Differentiating circuits, *Electronic integrators.

Neidhardt, P.
PRINCIPLES OF ACCOMPLISHING LEARNING AND LOGICAL PROCESSES IN AUTOMATIC EQUIPMENT. 10 May 63, 20p. JPRS: 19134.
Order from OTS $0.75 63-21797

Trans. of die Technik (East Germany) 1963, v. 18, no. 4, p. 277-281.

DESCRIPTORS: *Cybernetics, Automation, *Artificial intelligence, *Learning, Information theory, Mathematical logic, Algebras, *Computer logic, Switching circuits, Triodes, Transistors, Magnetic cores, Gates (Circuits), *Adaptive control systems.

The following article is concerned with an especially important field of modern cybernetics, namely with the principles of adaptive automated technical systems. These are self-organizing, dynamic systems, capable of learning, which represent the last, still inadequately studied group of cybernetics, which up to now has dealt chiefly with self-regulating and self-stabilizing systems. We present here the ideas of a specialist in the field of information processing, discussing the working principles of the electronic realization of the principle of logical combinations and of the learning process by means of binary and non-digital learning matrices. (Author)

Okhremenko, N. M.
ELEKTROMAGNETISCHE ERSCHEINUNGEN IN FLACHEN INDUKTIONSPUMPEN FUER FLUESSIGE METALLE (Electromagnetic Phenomena in Flat-Type Induction Pumps for Liquid Metals).
Order from TIB $2.60

Trans. in German of Elektrichestvo (USSR) 1960, no. 3, p. 48-55.
Other translations in English are available from ARS in Its Journal, v. 32, no. 9, $3.00 and from pp $14.00.

DESCRIPTORS: Electromagnetic properties, Inductance, *Pumps, *Liquid metals.

Pergament, E. B.
SUJECION DE CABLES A LOS RODILLOS AISLADORES MEDIANTE ANILLOS POLICLORVINILICOS (Vyazka Provoda k Rolikam Polikhlorvinilovymi Kol'tsami) (Fixing of Cables to Insulator Rolls by Polyvnyilchloride Rings). 7p. CID: 62-118.
Order from OTS, ETC or CID $0.90 62-26767

Trans. in Spanish of Energetik (USSR) 1959, v. 7, no. 6, p. 20-21.

DESCRIPTORS: *Polyvinyl chloride, Polymers, *Cable grips, *Electric insulation, Electric cables.

Pevsner, O. B.
ERSATZSCHALTUNG UND GENAUES KREISDIAGRAMM EINER SYNCHRONEN REAKTIONSMACHINE (KLEINSTMOTOREN) (Equivalent Circuit and Exact Circle Diagram of a Synchronous Reaction-Alternator (Miniature Motors).
Order from TIB $1.80

Trans. in German of Elektrichestvo (USSR) 1960, no. 2, p. 64-68.

DESCRIPTORS: *Circuits, Generators, Electric motors, *Synchronizers.

Polyak, G. I. and Golyatin, V. G.
SCHALTUNG ZUM PRUEFEN VON HOCHSPANNUNGS-LEISTUNGSVENTILEN (Connection for Testing of Highvoltage-Power Valves). 6p.
Order from TIB $1.30

Trans. in German of Elektrichestvo (USSR) 1960, no. 3, p. 73-74.
Other translations are available in English from OTS or SLA $1.10 as 61-23525, DSIR LLU M. 2685 [1961] [4]p. and from PP $14.00.

DESCRIPTORS: *Switching circuits, Voltage, *Valves, *Cut-off valves, *Electric currents, Test equipment, *Direct current.

Proshchin, E. A.
UNION DE CABLES FLEXIBLES DE TRES HILOS COMPUESTOS MARCA GTSH 6 KV CON AISLAMIENTO DE CAUCHO (Soedinenie Trekhzhil'nykh Gibkikh Kabelei Marki GTSH 6 kv s Rezinovoi Izolyatsiei) (Union of GTSH 6 Kv Three Strand Flexible Cables with Rubber Insulation). 13p. CID: 62-196.
Order from OTS, ETC or CID $1.10 62-26845

Trans. in Spanish of Energetik (USSR) 1956 [v. 4] no. 7, p. 35-37.

DESCRIPTORS: *Electric cables, Electric insulation, *Rubber coatings.

Raikh, I. Ya. and Faingersh, Ya. D.
METODO PARA LA COLOCACION Y MONTAJE DE CABLES VERTICALES (Metod Prokladi i Montazha Vertikal'nogo Osushennogo Kabelya) (Location and Installation Method for Vertical Cables). 13p. CID: 62-194.
Order from OTS, ETC or CID $0.80 62-26843

Trans. in Spanish of Energetik (USSR) 1955 [v. 3] no. 2, p. 26-29.

DESCRIPTORS: *Electric, *Cables, Installation.

Schulze, A.
SUMMARIZING REVIEW OF THE ENTIRE FIELD OF HEATING ELEMENT ALLOYS. 1951, 11p. (figs. tables omitted).
Order from SLA $1.60 62-20476

Trans. of [Deutsche] Elektrotechnik (Germany) 1950, v. 4, no. 5, p. 183-188.

DESCRIPTORS: *Heating elements, *Alloys, *Electrical conductivity, Resistance, Electrochemistry *Copper alloys, *Chromium alloys, *Iron alloys, *Nickel alloys.

Titarenko, M. V.
ALGUNAS POSIBILIDADES DE EMPLEO DE ESQUEMAS CON TRANSISTORES PARA LA DEFENSA DE RELES (Nekotorye Vozmozhnosti Primeneniya Skhem s Poluprovodnikami dlya Releinoi Zashchity) (Some Possible Utilizations of Transistor Patterns in Relay Protection). 8p. 3 refs. CID:62-124.
Order from OTS, ETC or CID $0.90 62-26773

Trans. in Spanish of Elektricheskie Stantsii (USSR) 1958 [v. 29] no. 4, p. 68-69.

DESCRIPTORS: *Relays, *Transistors, Electric relays.

Usov, V. V.
METALLO-CERAMIC CONTACTS WITH CADMIUM OXIDE. [1962] 4p. (figs. omitted).
Order from OTS or SLA $1.10 63-10027

Trans. of Elektrichestvo (USSR) 1948, no. 1, p. 60-62. Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 59-19075, DSIR LLU M. 180, 14 Oct 48, 3p.

DESCRIPTORS: *Cadmium compounds, *Oxides, *Sliding contacts, Electrical properties, Cermets.

Vakser, B. D. and Guravich, S. M.
VORGÄNGE IN DER ISOLATION VON ELEKTRISCHEN HOCHSPANNUNGSMASCHINEN, DIE ZUM DURCHSCHLAG FUEHREN (Processes in the Insulation of Electric High-Voltage Machines Leading to Breakdown).
Order from TIB $1.55

Trans. in German of Elektrichestvo (USSR) 1961, no. 9, p. 70-73.

DESCRIPTORS: *Electric insulation, Voltage, Machines, Voltage.

Voskresenskii, V. V., Barakaev, Kh. F. and Travin, L. V.
EIN PHYSIKALISCHES MODELL DER GLEICHSTROM-UEBERTRAGUNG STALINGRAD-DONEZBECKEN (A Physical Model of the Direct-Current Transmission Stalingrad-Donbass). 21p.
Order from TIB $3.20

Trans. in German of Elektrichestvo (USSR) 1960, no. 2, p. 28-35.

DESCRIPTORS: Physics, *Direct current, *Transmission.

Mechanical Engineering

HEAT AND POWER ENGINEERING ENERGETICHESKII INSTITUT, 1961, NO. 3: SELECTED ARTICLES. 14 Mar 63 [64]p. 16 refs. FTD-TT-62-1656 AD-402 461.
Order from OTS or SLA $6.60 63-19328

Unedited rough draft trans. of Teploenergetika, Energeticheskii Institut (USSR) 1961, no. 3, p. 100-107, 116-128, 137-163.

DESCRIPTORS: *Heat, *Power, *Engineering, *Energy conversion, *Semiconductor devices, *Photoelectric cells (Semiconductor), Alloys, Impurities, Distribution, *Silicon crystals, *Batteries and components, Design, Electrical properties, *Solar energy, *Solar cells, *Reflectors.

Contents:
The distribution of impurities in the alloyed layer of photoelectric converters, by A. K. Zaitsev and A. Ya. Gliberman
A study of the possibility of using polycrystalline silicon to make photoelectric converters, by A. Ya. Gliberman and others
Designs and electrical characteristics of batteries made from silicon photoelectric converters, by G. S. Daletskii and N. V. Shavrin
Investigation of silicon photoelectric cells for high concentrations of solar energy, by R. P. Borovikova
Reflectors for solar photoelectric batteries, by G. I. Markov.

POWER MACHINE CONSTRUCTION: SELECTED ARTICLES. 4 Mar 63 [83]p. 39 refs. FTD-TT-62-1816
Order from OTS or SLA $8.10 63-19173

Unedited rough draft trans. of [Politekhnicheskii Institut, Leningrad. Trudy] (USSR) 1962, no. 221, p. 5-46, 103-109.

DESCRIPTORS: *Centrifugal compressors, Compressor rotors, Compressor blades, Compressible flow, Fluid mechanics, Dynamics.

Contents:
Study of the operation of a centrifugal compressor wheel, by S. A. Anisimov
The influence of the number of vanes on the efficiency of the centrifugal wheel with a single-stage cascade, by S. A. Anisimov and others
Study of the efficiency of centrifugal compressor wheels with a two-stage vane cascade, by S. A. Anisimov and others
Calculation of variable regimes of cascade flow, by V. A. Zysin.

USSR INDUSTRIAL DEVELOPMENT: SOVIET POWER MACHINERY NO. 12. 15 May 63, 13p. JPRS: 19195.
Order from OTS $0.50 63-21816

Trans. of Energomashinostroenie (USSR) 1963 [v. 9] no. 3, p. 1-2, 43, 45 and from Sovetskaya Litva (USSR) 1963, 1 Feb.

DESCRIPTORS: *Industrial production, *Power equipment, *Machines, Construction, *Turbines, *Hydraulic systems, *Steam turbines, Design.

Contents:
Tasks for power machinery construction
Hydraulic turbines for Krasnoyarsk hydroelectric power station, by M. I. Cal'perin
Steam turbines, by P. D. Buchkin
Increase in machinery output, by B. Gaigalas.

Govenchik, I. I.
AUTOMATIC DEFROSTING OF EVAPORATORS IN COMMERCIAL REFRIGERATING EQUIPMENT BY HOT FREON VAPOUR (Avtomatizatsiya Ottaivaniya Isparitelei Torgovogo Kholodil'nogo Oborudovaniya Goryachim Parom Freona) tr. by J. Hardy. 5 Dec 62 [10]p. (foreign text included) 6 refs. [CSIRO] Trans. no. 5880.
Order from OTS or SLA $1.10 63-15974

Trans. of Kholodil'naya Tekhnika (USSR) 1961 [v. 38] no. 6, p. 31-33.

DESCRIPTORS: Automatic, *De-icing systems, *Evaporators, *Refrigeration systems, Heat, *Freon, Vapors, Design, Operation.

Gurvich, I. B.
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DESCRIPTORS: Mechanical engineering, *Combustion engines.

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PREVENCION DEL DETERIORO DEL RECALENTADOR DE VAPOR (Predotvrashchenie Povrezhdenii Paroperegrevatelya) (Anti-deteriorating Measures in Steam Superheaters). 10p. CID: 62-166.
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Trans. in Spanish of Energetik (USSR) 1956 [v. 4] no. 3, p. 10-11.

DESCRIPTORS: *Boilers, *Deterioration, Control, Steam, Heaters.

Tret'yakov, N.
NUEVOS DISEÑOS DE MAQUINAS DE ABSORCION PARA REFRIGERADORES DOMESTICOS (Novye Konstruktsii Absorbtionnykh Mashin Domashnikh Kholodil'nikov) (New Design of Absorption Machines for Domestic Refrigerators) 10p. CID: 62-125.
Order from OTS, ETC or CID $1.00 62-26774

Trans. in Spanish of Kholodil'naya Tekhnika (USSR) 1960 [v. 37] no. 1, p. 9-11.

DESCRIPTORS: *Refrigeration systems, Design, Absorption.

Ordnance, Missiles, and Satellite Vehicles

GERMAN MINE FIELDS AND THEIR DISARMAMENT (FROM WAR EXPERIENCE). 1953 [17]p.
Order from OTS or SLA $1.60 62-19042

Trans. of mono. Minnye Zagrazhdeniya Nemtsev i Bor'ba s Nimi (Iz Boevogo Opyta), Voenizdat NKO SSSR, 1942.

DESCRIPTORS: *Minefields, *Land mine warfare, Construction, *Mine clearance, Mine detectors, Warfare, *Mines (Ordnance), Germany .

Contents:
How Germans construct mine obstacles, by V. Sokhatskii (originally pub. in [Krasnaya Zvezda] (USSR) 1942, 16 Jan).
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Overcoming obstacles during combat in woods, by S. Kolomets
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DESCRIPTORS: *Telescopic gun sights, Vehicles.

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FLASH-BACK ARRESTERS MADE OF POROUS SINTERED METALS: [A NEW SAFETY DEVICE FOR EXPLOSIVE GASES] (Flammensperren aus Porosem Sintermetall). [1962] [7]p. 2 refs.
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DESCRIPTORS: *Safety devices, *Metal forming presses, Forges.

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LOSSES OF WEIGHT IN BLOCKS OF FROZEN MEAT DURING STORAGE (Poteri Vesa Morozhenogo Myasa v Blokakh pri Khranenii) tr. by A. Neal [1962] [10]p. (foreign text included). [CSIRO] no. 5956.
Order from OTS or SLA $1.10 63-13237

Trans. of Kholodil'naya Tekhnika (USSR) 1962, [v. 39] no. 1, p. 37-40.

DESCRIPTORS: *Frozen food, *Meat, *Storage, Preservation, Containers.

It is essential that blocks of frozen meat be preserved only in cartons or containers, and that there is a preliminary wrapping round the blocks of a material which is as impervious to vapour as possible. Considering the extremely insignificant losses of weight during storage of the packaged blocks of meat, there is no case for establishing norms of natural loss. The packaged blocks should be accepted and discharged according to the weight shown on the stencil. The abolition of the norm of natural loss in packaged blocks of meat during storage permits their acceptance and discharge without weighing which really cuts expenses on inspection and bookkeeping, and will also make greater mechanization in loading and unloading possible. (Author)

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Trans. of Brot und Gebäck (West Germany) 1962, v. 16, no. 6, p. 108-116.

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DESCRIPTORS: *Fishes, *Freezing, Air, Gas flow.

Mikhailov, S. V.
ON THE COMPARATIVE EFFICIENCY OF PRODUCTION OF SOME PRODUCTS OF THE LAND AND SEA (O Sravnitel'noi Effektivnosti Proizvodstva Nekotorykh Produktov Morya i Syshi), tr. by W. G. Van Campen. Oct 62, 12p. 3 refs.
Order from OTS or SLA $1.60 63-15143

Trans. of Okeanologiya (USSR) 1962, v. 2, no. 3, p. 385-392.

DESCRIPTORS: *Economics, *Food, Meat, Fishes, Production, Agriculture, *Animal industry, Oceans, Aquatic animals, *Fisheries, Nutrition.

Ryakhovskii, V. V.
THE DISINFECTION OF EGGS BY IONIZING RADIATION. [1963] [4]p. FASEB manuscript no. S 108-2.
Order from OTS or SLA $1.10 63-19371

Trans. of Veterinariya (USSR) 1962 [v. 39] no. 2, p. 76.

DESCRIPTORS: Disinfectants, Decontamination, *Eggs, Birds, *Radiation effects, Gamma rays, Microorganisms, Bacteria, Preservation, Taste, Odors, Colors.

Speranskii, L. I.
LACQUERED CELLOPHANE. 14 June 62 [11]p. (refs. omitted).
Order from OTS or SLA $1.60 63-10807

Trans. of Khim[icheskie] Volokna (USSR) 1961, no. 2, p. 33-37.
Another trans. is available from OTS or SLA $1.10 as 62-24647, Courtaulds ML-3393, 9 Nov 61 [8]p.

DESCRIPTORS: *Packing materials, *Plastic films, Coatings, *Varnishes, Resins, Nitrocellulose, Manufacturing methods, Food.

Theimer, Otto, F.
DESIGN OF FLOUR SILO CELLS (Zur Berechnung von Mehlsilozellen). [1962] [36]p. (foreign text included) 10 refs.
Order from SLA $3.60 63-10825

Trans. of Die Bautechnik (West Germany) 1957, v. 34 no. 12, p. 458-465.

DESCRIPTORS: *Flour, Storage, Handling, *Containers, Structures, *Silos, Design, Loading (Mechanics), Pressure, Impact shock, Vibration, Friction, Geometric forms, Fracture (Mechanics), Fatigue (Mechanics), Graphic analysis.

Simple formulas are given for determining the silo pressures in flour cells. For safety, 50% of the increase due to impact is added to the values obtained by this calculation. Moreover, pressures resulting from the state of flow and bridge formation must also be taken into account. By superposition of the individual pressure diagrams, the most unfavorable loading case is obtained, which must be taken as a basis for dimensioning cell walls. The cell system of flour silos can be investigated most properly by the Cross

method. Thereby the most unfavorable loading cases can be determined simultaneously. In these investigations, the effect of the arches at the intersection points of cell walls must not be disregarded. The arch length should not be taken smaller than 1/10 of the larger cell span width. (Author)

Wiechers, S. G.
THE COW AND THE CHICKEN (MILK AND EGGS): LOWERING OF THE COAGULATION-GELATINIZATION TEMPERATURE. [1963] 3p. (figs. omitted).
Available from SLA on loan 63-18266

Partial trans. (p. 130-135) of [Nederlands Melk en Zuiveltijdschrift] 1952, v. 6 [no. 2, p. 127-136]. A complete trans. is available from SLA mi$1.80, ph$1.80 as 59-20645 [1959] 9p.

DESCRIPTORS: Bovines, Chickens, *Milk, Eggs, Food, Casien, Albumins, *Coagulation, Proteins (Derived), *Gelatins, Temperature, *Globulins, Substitutes

MACHINERY, FABRICATION, AND ACCESSORY EQUIPMENT

CONSTRUCTION AND ROAD MACHINERY MANUFACTURE AT A LEVEL FOR NEW TASKS; TOTALS FOR 1962, TASKS FOR 63. USSR Industrial Development: Soviet Construction Machinery no. 31. 3 Apr 63 [14]p. JPRS: 18509.
Order from OTS $0.50 63-21484

Trans. of Stroitel'nye i Dorozhnye Mashiny (USSR) 1963 [v. 8] no. 2, p. 1-2.

DESCRIPTORS: *Industrial production, *Construction, *Road building equipment, *Earth moving equipment, Hoists, Bulldozers, Vehicles.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CONSTRUCTION MACHINERY NO. 32. 25 Apr 63, 9p. JPRS: 18915.
Order from OTS $0.50 63-21685

Trans. from Izvestiya (USSR) 1963, 6 Jan, p. 6; Ekonomicheskaya Gazeta (USSR) 1963, no. 1(74) 5 Jan, p. 22; and an unidentified Russian newspaper, 27 Nov 62

DESCRIPTORS: *Industrial production, *Machines, *Construction, *Electric machinery, *Tools, *Road building equipment, Maintenance, Industrial procurement, Well drilling.

Contents:
For the best power tool in the world, by M. Nitetskii
Spare part delays cause stoppages in construction, by G. Chernetsov and Ya. Nantsel'
New ten kilometer well, by L. Matyukhin.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CONSTRUCTION MACHINERY NO. 33. 10 May 63, 37p. JPRS: 19141.
Order from OTS $1.00 63-21799

Trans. of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1963, no. 2, p. 52-57 (excerpts) Stroitel'nye i Dorozhnye Mashiny (USSR) 1963 [v. 8] no. 3, p. 8-14 (excerpt) 25-27, 37-38; Mekhanizatsiya Stroitel'stva (USSR) 1963 [v. 20] no. 3, p. 22-23 (excerpt) and from Stroitel'naya Gazeta (USSR) 1963, 13 Mar.

DESCRIPTORS: *Industrial production, *Machines, *Construction, *Transmission lines, *Vibrators (Mechanical), *Road building equipment, *Excavators, Design, Reliability, *Arctic regions, Industrial plants, *Automation, *Concrete, *Hoists.

Contents:
Power-line building equipment, by E. Fel'd
Construction and road machinery, by A. I. Safronov
Increased service life of excavators, by K. P. Chudakov and others
Operational reliability of construction machinery for the North, by V. A. Koval'chuk
Automation in concrete plants, by F. A. Lapir: review of mono. Sredstva i Skhemy Avtomatizatsii Protsessov na Betonnykh Zavodakh, Moscow, 1962, by G. G. Zelichenok
The tower crane, KB-25, by Ya. E. Sigal.

USSR INDUSTRIAL DEVELOPMENT: SOVIET METALWORKING EQUIPMENT NO. 48. 12 Apr 63 [23]p. JPRS: 18686.
Order from OTS $0.75 63-21569

Trans. of Kuznechno-Shtampovochnoe Proizvodstvo (USSR) 1962 [v. 4] no. 5, p. 39-44; Planovoe Khozyaistvo (USSR) 1963 [v. 40, no. 2] p. 45-46; Referativnyi Zhurnal. Tekhnologiya Mashinostroeniya (USSR) 1963, no. 1, p. 102-103, items IB627-628; Mashinostroenie (USSR) 1962, no. 6, p. 3-6.

DESCRIPTORS: Industrial production, *Industrial equipment, *Machine tools, Gears, *Milling machines, Machine tool industry, *Lathes, Automation, Bearings, Roller bearings, *Presses (Machinery), Catalogs.

Contents:
Technical-economic analysis of producing gears by (Machinery, Fabrications and Accessory Equipment, millings, by V. A. Krokha and others
Specialization in the machine tool industry
Automatic lines in the bearing industry, by M. Degtyreva
Automatic line for the production of cylindrical rollers
Group parts machining at the Dnepropetrovsk heavy presses plant, by I. I. Andreev
Planning group attachments, by V. A. Kupehenko and Ya. P. Samokhleb.

DESCRIPTORS: *Heat, *Power, *Engineering, *Energy conversion, *Semiconductor devices, *Photoelectric cells (Semiconductor), Alloys, Impurities, Distribution, *Silicon crystals, *Batteries and components, Design, Electrical properties, *Solar energy, *Solar cells, *Reflectors.

Contents:
The distribution of impurities in the alloyed layer of photoelectric converters, by A. K. Zaitsev and A. Ya. Gliberman
A study of the possibility of using polycrystalline silicon to make photoelectric converters, by A. Ya. Gliberman and others
Designs and electrical characteristics of batteries made from silicon photoelectric converters, by G. S. Daletskii and N. V. Shavrin
Investigation of silicon photoelectric cells for high concentrations of solar energy, by R. P. Borovikova
Reflectors for solar photoelectric batteries, by G. I. Markov.

POWER MACHINE CONSTRUCTION: SELECTED ARTICLES. 4 Mar 63 [83]p. 39 refs. FTD-TT-62-1816
Order from OTS or SLA $8.10 63-19173

Unedited rough draft trans. of [Politekhnicheskii Institut, Leningrad. Trudy] (USSR) 1962, no. 221, p. 5-46, 103-109.

DESCRIPTORS: *Centrifugal compressors, Compressor rotors, Compressor blades, Compressible flow, Fluid mechanics, Dynamics.

Contents:
Study of the operation of a centrifugal compressor wheel, by S. A. Anisimov
The influence of the number of vanes on the efficiency of the centrifugal wheel with a single-stage cascade, by S. A. Anisimov and others
Study of the efficiency of centrifugal compressor wheels with a two-stage vane cascade, by S. A. Anisimov and others
Calculation of variable regimes of cascade flow, by V. A. Zysin.

USSR INDUSTRIAL DEVELOPMENT: SOVIET POWER MACHINERY NO. 12. 15 May 63, 13p. JPRS: 19195.
Order from OTS $0.50 63-21816

Trans. of Energomashinostroenie (USSR) 1963 [v. 9] no. 3, p. 1-2, 43, 45 and from Sovetskaya Litva (USSR) 1963, 1 Feb.

DESCRIPTORS: *Industrial production, *Power equipment, *Machines, Construction, *Turbines, *Hydraulic systems, *Steam turbines, Design.

Contents:
Tasks for power machinery construction
Hydraulic turbines for Krasnoyarsk hydroelectric power station, by M. I. Cal'perin
Steam turbines, by P. D. Buchkin
Increase in machinery output, by B. Gaigalas.

Govenchik, I. I.
AUTOMATIC DEFROSTING OF EVAPORATORS IN COMMERCIAL REFRIGERATING EQUIPMENT BY HOT FREON VAPOUR (Avtomatizatsiya Ottaivaniya Isparitelei Torgovogo Kholodil'nogo Oborudovaniya Goryachim Parom Freona) tr. by J. Hardy. 5 Dec 62 [10]p. (foreign text included) 6 refs. [CSIRO] Trans. no. 5880.
Order from OTS or SLA $1.10 63-15974

Trans. of Kholodil'naya Tekhnika (USSR) 1961 [v. 38] no. 6, p. 31-33.

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DESCRIPTORS: *Fishes, *Freezing, Air, Gas flow.

Mikhailov, S. V.
ON THE COMPARATIVE EFFICIENCY OF PRODUCTION OF SOME PRODUCTS OF THE LAND AND SEA (O Sravnitel'noi Effektivnosti Proizvodstva Nekotorykh Produktov Morya i Syshi), tr. by W. G. Van Campen. Oct 62, 12p. 3 refs.
Order from OTS or SLA $1.60 63-15143

Trans. of Okeanologiya (USSR) 1962, v. 2, no. 3, p. 385-392.

DESCRIPTORS: *Economics, *Food, Meat, Fishes, Production, Agriculture, *Animal industry, Oceans, Aquatic animals, *Fisheries, Nutrition.

Ryakhovskii, V. V.
THE DISINFECTION OF EGGS BY IONIZING RADIATION. [1963] [4]p. FASEB manuscript no. S 108-2.
Order from OTS or SLA $1.10 63-19371

Trans. of Veterinariya (USSR) 1962 [v. 39] no. 2, p. 76.

DESCRIPTORS: Disinfectants, Decontamination, *Eggs, Birds, *Radiation effects, Gamma rays, Microorganisms, Bacteria, Preservation, Taste, Odors, Colors.

Speranskii, L. I.
LACQUERED CELLOPHANE. 14 June 62 [11]p. (refs. omitted).
Order from OTS or SLA $1.60 63-10807

Trans. of Khim[icheskie] Volokna (USSR) 1961, no. 2, p. 33-37.
Another trans. is available from OTS or SLA $1.10 as 62-24647, Courtaulds ML-3393, 9 Nov 61 [8]p.

DESCRIPTORS: *Packing materials, *Plastic films, Coatings, *Varnishes, Resins, Nitrocellulose, Manufacturing methods, Food.

Theimer, Otto, F.
DESIGN OF FLOUR SILO CELLS (Zur Berechnung von Mehlsilozellen). [1962] [36]p. (foreign text included) 10 refs.
Order from SLA $3.60 63-10825

Trans. of Die Bautechnik (West Germany) 1957, v. 34 no. 12, p. 458-465.

DESCRIPTORS: *Flour, Storage, Handling, *Containers, Structures, *Silos, Design, Loading (Mechanics), Pressure, Impact shock, Vibration, Friction, Geometric forms, Fracture (Mechanics), Fatigue (Mechanics), Graphic analysis.

Simple formulas are given for determining the silo pressures in flour cells. For safety, 50% of the increase due to impact is added to the values obtained by this calculation. Moreover, pressures resulting from the state of flow and bridge formation must also be taken into account. By superposition of the individual pressure diagrams, the most unfavorable loading case is obtained, which must be taken as a basis for dimensioning cell walls. The cell system of flour silos can be investigated most properly by the Cross

method. Thereby the most unfavorable loading cases can be determined simultaneously. In these investigations, the effect of the arches at the intersection points of cell walls must not be disregarded. The arch length should not be taken smaller than 1/10 of the larger cell span width. (Author)

Wiechers, S. G.
THE COW AND THE CHICKEN (MILK AND EGGS): LOWERING OF THE COAGULATION-GELATINIZATION TEMPERATURE. [1963] 3p. (figs. omitted).
Available from SLA on loan 63-18266

Partial trans. (p. 130-135) of [Nederlands Melk en Zuiveltijdschrift] 1952, v. 6 [no. 2, p. 127-136]. A complete trans. is available from SLA mi$1.80, ph$1.80 as 59-20645 [1959] 9p.

DESCRIPTORS: Bovines, Chickens, *Milk, Eggs, Food, Casien, Albumins, *Coagulation, Proteins (Derived), *Gelatins, Temperature, *Globulins, Substitutes

MACHINERY, FABRICATION, AND ACCESSORY EQUIPMENT

CONSTRUCTION AND ROAD MACHINERY MANUFACTURE AT A LEVEL FOR NEW TASKS; TOTALS FOR 1962, TASKS FOR 63. USSR Industrial Development: Soviet Construction Machinery no. 31. 3 Apr 63 [14]p. JPRS: 18509.
Order from OTS $0.50 63-21484

Trans. of Stroitel'nye i Dorozhnye Mashiny (USSR) 1963 [v. 8] no. 2, p. 1-2.

DESCRIPTORS: *Industrial production, *Construction, *Road building equipment, *Earth moving equipment, Hoists, Bulldozers, Vehicles.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CONSTRUCTION MACHINERY NO. 32. 25 Apr 63, 9p. JPRS: 18915.
Order from OTS $0.50 63-21685

Trans. from Izvestiya (USSR) 1963, 6 Jan, p. 6; Ekonomicheskaya Gazeta (USSR) 1963, no. 1(74) 5 Jan, p. 22; and an unidentified Russian newspaper, 27 Nov 62

DESCRIPTORS: *Industrial production, *Machines, *Construction, *Electric machinery, *Tools, *Road building equipment, Maintenance, Industrial procurement, Well drilling.

Contents:
For the best power tool in the world, by M. Nitetskii
Spare part delays cause stoppages in construction, by G. Chernetsov and Ya. Nantsel'
New ten kilometer well, by L. Matyukhin.

USSR INDUSTRIAL DEVELOPMENT: SOVIET CONSTRUCTION MACHINERY NO. 33. 10 May 63, 37p. JPRS: 19141.
Order from OTS $1.00 63-21799

Trans. of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1963, no. 2, p. 52-57 (excerpts) Stroitel'nye i Dorozhnye Mashiny (USSR) 1963 [v. 8] no. 3, p. 8-14 (excerpt) 25-27, 37-38; Mekhanizatsiya Stroitel'stva (USSR) 1963 [v. 20] no. 3, p. 22-23 (excerpt) and from Stroitel'naya Gazeta (USSR) 1963, 13 Mar.

DESCRIPTORS: *Industrial production, *Machines, *Construction, *Transmission lines, *Vibrators (Mechanical), *Road building equipment, *Excavators, Design, Reliability, *Arctic regions, Industrial plants, *Automation, *Concrete, *Hoists.

Contents:
Power-line building equipment, by E. Fel'd
Construction and road machinery, by A. I. Safronov
Increased service life of excavators, by K. P. Chudakov and others
Operational reliability of construction machinery for the North, by V. A. Koval'chuk
Automation in concrete plants, by F. A. Lapir: review of mono. Sredstva i Skhemy Avtomatizatsii Protsessov na Betonnykh Zavodakh, Moscow, 1962, by G. G. Zelichenok
The tower crane, KB-25, by Ya. E. Sigal.

USSR INDUSTRIAL DEVELOPMENT: SOVIET METALWORKING EQUIPMENT NO. 48. 12 Apr 63 [23]p. JPRS: 18686.
Order from OTS $0.75 63-21569

Trans. of Kuznechno-Shtampovochnoe Proizvodstvo (USSR) 1962 [v. 4] no. 5, p. 39-44; Planovoe Khozyaistvo (USSR) 1963 [v. 40, no. 2] p. 45-46; Referativnyi Zhurnal. Tekhnologiya Mashinostroeniya (USSR) 1963, no. 1, p. 102-103, items IB 627-628; Mashinostroenie (USSR) 1962, no. 6, p. 3-6.

DESCRIPTORS: Industrial production, *Industrial equipment, *Machine tools, Gears, *Milling machines, Machine tool industry, *Lathes, Automation, Bearings, Roller bearings, *Presses (Machinery), Catalogs.

Contents:
Technical-economic analysis of producing gears by (Machinery, Fabrications and Accessory Equipment, millings, by V. A. Krokha and others
Specialization in the machine tool industry
Automatic lines in the bearing industry, by M. Degtyreva
Automatic line for the production of cylindrical rollers
Group parts machining at the Dnepropetrovsk heavy presses plant, by I. I. Andreev
Planning group attachments, by V. A. Kupchenko and Ya. P. Samokhleb.

USSR INDUSTRIAL DEVELOPMENT: SOVIET METAL-WORKING EQUIPMENT NO. 53. 17 May 63, 5p. JPRS: 19236.
Order from OTS $0.50 63-21837

Trans. (some excerpts) of Mashinostroitel' (USSR) 1963, no. 3, p. 7-9, 15, 23.

DESCRIPTORS: *Industrial production, *Industrial equipment, *Machine tools, *Lathes, Drills, *Automation, *Control systems, Programming (Computers), *Grinders, Presses (Machinery) Conveyors, Milling machines, Cutting tools.

Contents:
New automatic high-precision drilling lathe
Program control of equipment at enterprises of the Moscow City Sovnarkhoz, by A. I. Markin
New general-purpose surface-grinding machine
New machine tools.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 70. 30 Apr 63, 21p. JPRS: 19017.
Order from OTS $0.75 63-21736

Trans. of Tekhnika Kino i Televideniya (USSR) 1963 [v. 7] no. 2, p. 1-3, 93-94, and back cover.

DESCRIPTORS: *Industrial production, *Precision equipment, Television receivers, Management engineering, Awards, Photographic equipment, *Motion-picture cameras.

Contents:
The fastest way to solve the problems of developing television receiver standards, by L. Semenov and others
Diplomas and medals of the Exposition of Achievements of the National Economy for New Cine Technology
The type 35BAS10-1 anamorphic motion-picture unit.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 71. 7 May 63, 16p. JPRS: 19081.
Order from OTS $0.50 63-21768

Trans. of Kommunist, Moscow (USSR) 1963 [v. 39] no. 2, p. 56-59; Nauchno-Tekhnicheskie Obshchestva SSSR, 1963 [v. 5] no. 1, p. 34-36; Svetotekhnika (USSR) 1963 [v. 9] no. 2, p. 32.

DESCRIPTORS: *Industrial production, *Precision equipment, Radioactive isotopes, *Industrial radiography, *Indicator lights, Glow discharges.

Contents:
Industrial applications of radioactive isotopes, by V. Letenko and V. Postnikov
Some beneficial results of public inspection in the instrument-building industry, by A. Gavrilovin
IN-1 glow discharge type numerical indicator.

USSR INDUSTRIAL DEVELOPMENT: SOVIET PRECISION EQUIPMENT NO. 73. 22 May 63, 40p. JPRS: 19331.
Order from OTS $1.25 63-21885

Trans. of ##Kommunist, Moscow (USSR) 1963 [v. 39] no. 2, p. 56-59; Sovetskaya Pechat' (USSR) 1962, no. 12, p. 13-14; Tekhnika Kino i Televideniya (USSR) 1963 [v. 7] no. 3, p. 73-75; Ukraina (USSR) 1963, no. 4, p. 2, 12; Ogonek (USSR) 1963 [v. 41] no. 2, p. 5; and from Rabochaya Gazeta (USSR) 1963, 1 Mar. ##Another trans. is available from OTS $0.50 in 63-21768, JPRS-19081, 7 May 63, 16p.

DESCRIPTORS: *Industrial production, *Precision equipment, *Radioactive isotopes, Nuclear industrial applications, *Sound reproduction systems, Viewing screens, *Television receivers, *Motion picture cameras, Design, Training, Computers.

Contents:
##Industrial uses of radioactive isotopes, by V. Letenko and V. Postnikov
From "MIZ-56" to "reporter-5" tape recorder, by A. Grigor'ev
Projection-screen makers' problems, by V. Vladimirov and S. Galitskii
Defective "neman-2" television sets produced by Minsk radio plant, by V. Ponomarei
The "ekran" 8-mm movie camera, by R. M. Gainullin and A. A. Usachev
Design deficiences in the 16-SP motion picture camera
A new training shop at the "arsenal" plant in Kiev
Calculation time cut from one year to ten hours with "Ural-2" computer, by D. Kan.

Astakhov, Yu. V.
ANODIC-MECHANICAL NOTCHING MACHINE MODEL ME-4. 15 Apr 63 [4]p. FTD-TT-63-153.
Order from OTS or SLA $1.10 63-19486

Unedited rough draft trans. of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1961, no. 11, p. 42-44.

DESCRIPTORS: *Machine tools, Anodes, Disks, Design, Specifications.

Komarov, M. S. and Kurendash, R. S.
SIERRA DE VIBRACION CON EL ACCIONAMIENTO ELECTROMAGNETICO (Vibratsionnaya Pila s Elektromagnitnym Privodom) (Electromagnetic Driven Whipsaw) 6p. CID: 62-128.
Order from OTS, ETC or CID $0.85 62-26777

Trans. in Spanish of Vestnik Mashinostroeniya (USSR) 1955 [v. 35] no. 10, p. 69-70.

DESCRIPTORS: *Power saws, Electromagnetism.

Mukhin, V. M.
MEJORA DEL FUNCIONAMIENTO DE LAS CLASIFICADORAS-FROTADORAS (Uluchshenie Raboty Protirochnyi Sortirovok) (Improvement in the Operation of Contact-Friction Machines). 6p. CID: 62-106.
Order from OTS, ETC or CID $0.85 62-26755

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1961 [v. 36] no. 5, p. 24-25.

DESCRIPTORS: Operation, *Machines, *Friction, Classification.

Nadezhdina, N. V.
EXPERIENCIAS EN LA REDUCCION DEL TIEMPO AUXILIAR EN EL TRABAJO DE MAQUINAS HERRAMIENTAS (Opyt Sokrashcheniya Vspomogatel'nogo Vremeni Stanochnikov) (Experiences on Auxiliary Time Reduction in the Operation of Machine-Tools) 7p. CID: 62-191.
Order from OTS, ETC or CID $0.90 62-26840

Trans. in Spanish of [Avtomobil'naya Promyshlennost'] (USSR) 1955, no. 12 [insert page].

DESCRIPTORS: *Machine tools, Operation, Time.

Tagiev, E. I. and Orlov, A. V.
THE PROBLEM OF INCREASING DRILLING DEPTH. 13 May 63, 11p. JPRS: 19161.
Order from OTS $0.50 63-21807

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Neft' i Gaz (USSR) 1962 [v. 5] no. 12, p. 111-115.

DESCRIPTORS: *Well drilling, *Drilling machines, Earth augers, Pipes, Pumps, Design, *Industrial equipment, Boreholes.

Engines and Propulsion Systems

Berg, Heinz H.
DETONATION VALUE OR DETONATION LIMITS OF ENGINE AND FUEL. [1962] 7p. 3 refs.
Order from SLA $1.10 63-10479

Trans. of [ATZ] Automobiltechnische Zeitschrift (Germany) 1939, v. 42, no. 2, p. 41-[44].

DESCRIPTORS: *Internal combustion engines, *Fuels, Knocking, Antiknock, Exhaust valves, Sodium, Cooling, Passenger vehicles.

Evaluation of fuels for automobiles has previously been made by the octane number. For better comparisons with other fuels, the determination of knocking limits or of knocking limit curves, especially in relation to excess air figures, appears to be of advantage. The characteristics and knocking behavior of automobile engines also can not be characterized by a single figure; but are better represented by similar limiting values. The close relation between fuel, operating conditions, and engine construction requires a careful consideration of their separate effects. Knocking limit values of fuels can be changed by the application of modern refining methods. Construction changes, especially the use of sodium-filled valves, also will raise the knocking limit values of small engines further, and will make possible more greater output of both fuel and engine. (Author)

Bonell, F. T. B., and Grabe, B. J.
REACTION POWER PLANT, tr. by P. C. C. 17 Oct 62, 9p. (figs. omitted).
Order from OTS or SLA $1.10 63-13010

Trans. of Swedish patent 146,526, cl. 46g:2/06, appl. 12 Nov 46, granted 3 June 54, pub. 17 Aug 54.

DESCRIPTORS: *Propelling charges, Projectiles, *Propulsion, Combustion chambers, Chemical reactions, Design, *Propellants.

Dolinskii, P. A.
EXACTITUD EN EL MONTAJE DE LAS CAMISAS DE UN CILINDRO DE MOTOR DIESEL (Tochnost' Ustanovki Gil'zy Tsilindra Dizelya) (Precision Fitting of Diesel Engine Cylinder Liners). 16p. 7 refs. CID: 62-141.
Order from OTS, ETC or CID $1.25 62-26790

Trans. in Spanish of Vestnik Mashinostroeniya (USSR) 1957 [v. 37] no. 3, p. 40-43.

DESCRIPTORS: *Cylinder liners, Diesel engines, Installation.

Eckel, F.
DETERMINATION OF SHORT-TIME FLUCTUATIONS IN ENGINE SPEED. 14 Oct 47, 4p.
Order from SLA $1.10 63-10470

Trans. of V[erein] D[eutscher] I[ngenieure]. Zeitschrift (Germany) 1939, v. 83, no. 13, p. 381-382.

DESCRIPTORS: *Engine surge, *Oscillograph, Electronic equipment, Phototubes, Scanning, *Internal combustion engines.

For accurate control and for determining the irregularities in internal combustion engines, a new kind of measuring instrument has been developed, with which short-time fluctuations in speed can be recorded without inertia. It employs a scanning disc as a transmitter and a photocell in the measuring circuit. (Author)

Osadchenko, M. F.
PROCEDIMIENTOS CONSTRUCTIVOS PARA REDUCIR EL CONSUMO DE ACEITE EN EL MOTOR (Konstruktivnye Metody Umen'sheniya Raskhoda Masla v Dvigatele) (Engineering Procedures Employed to Reduce Oil Consumption in the Engine). 13p. CID:62-122
Order from OTS, ETC or CID $1.10 62-26771

Trans. in Spanish of Avtomobilnaya Promyshlennost' (USSR) 1959, no. 3, p. 30-32.

DESCRIPTORS: Design, *Oil, Electric motors, Internal combustion engines, Consumption.

Pakhomov, B. P., Markovskii, E. A., and Stetsenko, V. I.
FUNCIONAMIENTO DE UN PURIFICADOR CENTRIFUGO DE AIRE DE PLENO REGIMEN POR REACCION PARA EL MOTOR D-14 (Nekotorye Osobennosti Raboty Polnopotochnoi Reaktivnoi Maslyanoi Tsentrifugi Dvigatelya D-14) (Operation of a Centrigugal Full-Speed Reaction Air Purifier for the D-14 Motor). 11p. CID: 62-190.
Order from OTS, ETC or CID $1.05 62-26839

Trans. in Spanish of Traktory i Sel'khozmashiny (USSR) 1959, no. 2, p. 12-14.

DESCRIPTORS: *Air intake filters, Combustion.

Manufacturing Equipment and Processes

Appelbock, M.
EXOTHERMIC MASS FOR HOT TOPPING. May 63, 600 words.
Order from TTIS $5.40 TTIS NS 73

Trans. of East German patent 24,579, appl. 1 June 59, pub. 19 Jan 63.

DESCRIPTORS: Hot working, *Materials, Processes.

Avzenshtat, V. S.
SEARCH FOR OPTIMAL OPERATING CONDITIONS OF CERTAIN AUTOMATA WITH PROGRAMMED CONTROL. 30 Apr 63, 17p. 2 refs. JPRS: 19007.
Order from OTS $0.50 63-21728

Trans. of Akademiya Navuk BSSR [Minsk. Vestsi]. Seryya Fizika-Tekhnichnykh Navuk, 1963, no. 1, p. 33-41.

DESCRIPTORS: *Automation, Plating, Machines, Operation, *Control systems, *Programming (Computers), Cybernetics, Industrial equipment, Industrial production.

Bodazhkov, V. A., Filippov, P. F. and others.
THE MANUFACTURE OF SPUR GEARS BY ROLLING. 20 May 63, 295p. 47 refs. JPRS: 19273.
Order from OTS $4.00 63-21856

Trans. of mono. Izgotovlenie Tsilindricheskikh Zubchatykh Koles Prokatkoi, Moscow/Leningrad, 1961, p. 2-186.

DESCRIPTORS: *Rolling mills, Construction, Operation, Calibration, *Gears, Manufacturing methods, Hot-working, Cold-working, Induction heating, Deformation, Creep, Metallography.

This book briefly describes the experiments which were conducted on rolling gears and on the construction of rolling mills. This book gives characteristics of deformation of metal and induction heating during rolling of gears. Comparison results are given on the quality of machined and rolled gears as well as calculations of the economic advantage of rolling gears. The technology for manufacture of gears by rolling at the fatherland's plants is described in detail as well as subsequent stages of processing and introduction of the technology of combined hot and cold rolling. This latter technique permits one to obtain accurate gears without machining of teeth. This book is designed for engineers, technologists and structural engineers who work in the field of production of gears and pressure processing of metals. (Author)

Crevot, André and Béguin, Jean-Claude.
PRODUCTION OF ALUMINUM CONDUCTOR WIRE BY THE PROPERZI PROCESS AT ST. -JEAN-DE-MAURIENNE. [1962] 13p. (figs. omitted).
Order from SLA $1.60 63-10280

Trans. of Rev[ue] de l'Aluminium (France) 1958 [v. 35, no. 256] p. 751-757.

DESCRIPTORS: *Electric wire, *Aluminum wire, Manufacturing methods, Casting, Machinery.

The Properzi machine produces wire rod direct from molten aluminum leaving the electrolysis cells. The metal is poured into the triangular groove of a casting wheel closed over 180° by a band of mild steel; the stock passes continuously through a special 13-stand rolling mill; the wire is wound in 1000-kg. coils, thus reducing butt welds required in the course of further operations; a furnace serves to provide a softening heat treatment as required. This process, which has been long and troublesome in development, is now giving highly satisfactory results as regards both productivity and technical merit of products, aluminum or "Almelec." (Author)

Transport, Traction and Hoist Facilities

USSR INDUSTRIAL DEVELOPMENT: SOVIET AUTOMOTIVE INDUSTRIES NO. 32. 28 May 63, 9p. JPRS: 19462.
Order from OTS $0.50 63-21942

Trans. of Avtomobil'nyi Transport (USSR) 1963 [v. 41] no. 3, p. 41-43, 47.

DESCRIPTORS: *Industrial production, *Automotive industry, Vehicles, *Cargo vehicles, Trailers, *Passenger vehicles, Diesel engines, Specifications.

Contents:
New vehicles for 1963, by A. Anders
The BelAZ-540 dump truck, by B. Knyaz'kov (excerpt)
The RAF-977K van.

Dubinskii, P. K.
WHAT PREVENTS A BETTER UTILIZATION OF FREIGHT CAR CAPACITY. [1963] 3p.
Order from OTS or SLA $1.10 63-10949

Trans. of Zheleznodorozhnyi Transport (USSR) 1962 [v. 44, no. 9] p. 41-43.

DESCRIPTORS: *Railroad cars, Load distribution, Effectiveness, Cargo.

Grishaev, N. N.
DE LA EXPERIENCIA EN LA EXPLOTACION DE GRUAS PUENTE PARA GRANDES CARGAS (Iz Opyta Ekspluatatsii Mostovykh Kranov Tyazhelykh Rezhimov) (Experience Acquired in the Operation of Heavy Load Bridge Cranes). 10p. CID: 62-136.
Order from OTS, ETC or CID $1.00 62-26785

Trans. in Spanish of #Vestnik Mashinostroeniya (USSR) 1960 [v. 40] no. 4, p. 19-21.

DESCRIPTORS: *Hoists, Tests.

Lysov, M. I.
METODO Y RESULTADO DE PRUEBAS DE DESGASTE DE LOS MECANISMOS DE DIRECCION (Metodika i Rezul'taty Ispytanii Rulevykh Mekhanizmov na Iznos) (Method and Results of Wear Tests of Steering Mechanisms). 17p. CID: 62-111.
Order from OTS, ETC or CID $1.30 62-26760

Trans. in Spanish of Avtomobil'naya Promyshlennost' (USSR) 1959, no. 7, p. 27-30.
Another trans. is available in English from LC or SLA mi$2.40, ph$3.30 as 61-13486, RTS-1511, Oct 60 [11]p.

DESCRIPTORS: *Drives, Friction, Tests.

Malikov, A. N.
AUTOMATIZACION DE LAS FABRICAS DE FORJA Y ESTAMPADO (Avtomatizatsiya Kuznechno-Shtampovochnogo Proizvodstva) (Automation of Forging and Forging-Press Plants) 17p. 3 refs. CID: 62-133.
Order from OTS, ETC or CID $1.30 62-26782

Trans. in Spanish of [Avtomobil'naya Promyshlennost'] (USSR) 1955, no. 10, p. 19-23.

DESCRIPTORS: *Automation, *Forge presses, Industrial plants.

Metelitsa, A. V.
DISPOSITIVO AUTOMATICO PARA FRESADO DE CIERRES DE LAS TAPAS DE BIELA (Avtomaticheskoe Prisposoblenie dlya Frezerovaniya Zamka na Kryshke Shatuna) (Automatic Device for the Milling of Connecting Rod Head Caps). 8p. CID: 62-114.
Order from OTS, ETC or CID $0.90 62-26763

Trans. in Spanish of Avtomobil'naya Promyshlennost' (USSR) 1961 [v. 27] no. 9, p. 44-45.

DESCRIPTORS: Automation, *Milling machines. *Connecting rods.

Mogilko, N. V.
METODO DE PROFUNDIZACION Y RECTIFICACION DE LOS LECHOS DE LOS RIOS MEDIANTE LA REPOBLACION FORESTAL DE LAS ORILLAS (Metod Uglubleniya i Vypravleniya Rechnykh Rusel Obleseniem Beregov) (Deepening and Rectification Method of River Channels by Reforestation of River Banks). 28p. CID: 62-119.
Order from OTS, ETC or CID $1.75 62-26768

Trans. in Spanish of Rechnoi Transport (USSR) 1955 [v. 14] no. 10, p. 22-27.

DESCRIPTORS: *Inland waterways, Trees, *Forestry, *Erosion, *Rivers.

Morozov, B. I., Pchelin, I. K. and others.
CALCULO DEL ELEMENTO ELASTICO EN EL CONJUNTO DE REMOLQUE DE UN VEHICULO AUTOMOTOR UTILIZANDO EL SISTEMA DE ELECTROMODELADO (O Raschete Uprugogo Elementa Stsepnogo Ustroistva pri Ispol'zovanii Elektromodelirovaniya) (Determination of the Elastic Element in the Trailer Assembly of an Automotive Vehicle Employing the Electromodelling System). 21p. CID: 62-121.
Order from OTS, ETC or CID $1.50 62-26770

Trans. in Spanish of Avtomobil'naya Promyshlennost' (USSR) 1959, no. 4, p. 18-21.

DESCRIPTORS: *Trailers, *Elasticity, Determination, *Model tests.

Nezlobin, S. N.
PUESTA EN MARCHA AUTOMATICA DE LAS BOMBAS DE ALIMENTACION DE LAS TUBERIAS (Avtomaticheskii Zapusk Turbopitatel'nykh Nasosov) (Automatic Starting of Pipe Feeding Pumps). 7p. CID: 62-108.
Order from OTS, ETC or CID $0.90 62-26757

Trans. in Spanish of Energetik (USSR) 1956 [v. 4] no. 8, p. 14-15.

DESCRIPTORS: *Automation, Starting, *Pumps, *Pipes.

Nikitin, S. V.
ESTAMPADO DE PIEZAS FORJADAS PARA LEVAS GIRATORIAS DE AUTOMOVIL ZIS-150 POR EL METODO DE FLUENCIA (Shtampovka Pokovok Povorotnogo Kulaka Avtomobilya ZIS-150 Metodom Istecheniya) (Drop-Forging of Wrought Parts Employed in Rotating Cams of the ZIS-150 Automobile by the Fluency Method). 9p. CID: 62-192.
Order from OTS, ETC or CID $0.95 62-26841

Trans. in Spanish of [Avtomobil'naya Promyshlennost'] (USSR) 1955, no. 11, p. 24-26.

DESCRIPTORS: *Forging, Forged iron, *Drives, Passenger vehicles.

Osepchugov, V. V.
EL AUTOBUS LAZ-695 B (Avtobus LAZ-695B) (The LAZ-695B Passenger Bus). 14p. CID: 62-199.
Order from OTS, ETC or CID $1.15 62-26848

Trans. in Spanish of Avtomobil'naya Promyshlennost' (USSR) 1959, no. 4, p. 8-10.

DESCRIPTORS: *Passenger vehicles.

Parkhilovskii, I. G.
INFLUENCIA DE LA SUSPENSION EQUILIBRADORA SOBRE LAS VIBRACIONES DE LA CARROCERIA DURANTE EL DESPLAZAMIENTO DE LOS AUTOMOVILES (Vliyanie Uravnitel'noi Podveski na Kolebaniya Kuzova pri Dvizhenii Avtomobilya) (Influence of Balanced Suspension on Automobile Body Vibrations During Automobile Displacement) 33p. 6 refs. CID: 62-120.
Order from OTS, ETC or CID $1.95 62-26769

Trans. in Spanish of Avtomobil'naya Promyshlennost' (USSR) 1959, no. 4, p. 24-32.

DESCRIPTORS: *Passenger Vehicles, *Lift, Vibration.

Proshin, A. S.
MODERNIZACION DE LAS GRUAS DE TORRE DE GRAN POTENCIA (Modernizatsiya Tyazhelykh Bashennykh Kranov) (Modernisation of Heavy Duty Tower Cranes) 16p. CID: 62-195.
Order from OTS, ETC or CID $1.25 62-26844

Trans. in Spanish of Elektricheskie Stanrii (USSR) 1959 [v. 30] no. 1, p. 79-81.

DESCRIPTORS: *Hoists.

MATERIALS

Catharin, P.
NON-DESTRUCTIVE TESTING OF STANDARD PRISMS AS A DETERMINATION OF COMPRESSIVE STRENGTH. [1962] 35p. 50 refs.
Order from SLA $3.60 63-10182

Trans. of Zement-Kalk-Gips (West Germany) 1961, v. 14, no. 9, p. 370-384.

DESCRIPTORS: *Structural parts, *Prisms, *Concrete, Compressive properties, Determination, *Non-destructive testing, Cements, Hardening.

Tests to-date indicate that by means of the derived formulas we can compute the compressive strength from the E- and G- moduli, when cement quality is known. Accuracy can be described as satisfactory, when one bears in mind that considerable differences in compressive strength are recorded on standard prisms tested in different laboratories. A relation of the EG/D ratio to rate of hardening is also revealed. Further tests must establish to what extent the factors influencing the rate of hardening of cement can be classified. It is possible that determinations of compressive strength on the basis of E- and G- modulus measurements can then be improved. (Author)

Jakob, M
COMPARATIVE MEASUREMENTS ON VACUUM FLASKS. [May 63].
Order from BGIRA BGIRA-556

Trans. of Glas u[nd] Apparat (Germany) 1924, v. 21, p. 164-165.

DESCRIPTORS: Measurement, *Vacuum bottles, *Vacuum apparatus, Containers.

Kukolev, G. V. and Mel'nik, M. T.
EINFLUSS VON Cr_2O_3, P_2O_5, V_2O_5 und BaO AUF DIE MIKROSTRUKTUR DES PORTLANDZEMENT-KLINKERS (The Effect of Cr_2O_3, P_2O_5, V_2O_5 and BaO Admixtures on the Microstructure of Portland Cement-Clinker). 6p.
Order from TIB $1.30

Trans. in German of Akademiya Nauk SSSR. Doklady, 1960, v. 132, no. 1, p. 168-171.
Another trans. is available in English from OTS or SLA $1.10 as 61-28141, LC-1013, Nov 60 [5]p.

DESCRIPTORS: Additives, Chromium compounds, Oxides, Phosphorus compounds, Vanadium compounds, Barium compounds, *Microstructure, *Cements.

Narasaki, Toshio.
SOME PROPERTIES OF CATIONIC POLY-SOAP MIXTURES WITH NON-IONIC SURFACTANTS. [1962] 9p.
Order from SLA $1.10 63-10315

Trans. of Kogyo Kagaku Zasshi (Japan) 1961, v. 64 [no. 11] p. 1955-1957.

DESCRIPTORS: Polymers, *Soaps, Mixtures, Vinyl radicals, Ethyl radicals, *Pyridines, *Bromocarbons, Physical properties, Viscosity, Surface tension, Colloids, Foams, *Surface-active substances, *Ethylenes.

Some properties of cationic poly-soap mixtures (nitrogen atom in poly-α-vinyl-β-ethylpyridine made quaternary 29.3% by dodecyl bromide, 36.0% by ethyl bromide) with several non-ionic surfactants (Polyoxyethylene series) were examined. The viscosity of the mixture showed marked increase with the increased addition of oleophilic non-ionic surfactants. Quite contrary to this, with the addition of hydrophilic non-ionic surfactants, the values of viscosity did not vary much, but resulted in complex curves. Surface tensions of mixtures and non-ionic surfactants were about the same; however, at higher concentration, surface tension of the mixture increased more than that of individual non-ionic surfactants. This surface tension was quite stable with change of time, which was otherwise with cationic surfactants. In the presence of hydrophilic compound, synergism was found with permeation and solubility. Emulsion and frothiness revealed average value of each component. (Author)

Okhrimenko, I. S. and Kolin, V. L.
THE USE OF THE PMT-3 APPARATUS FOR EVALUATION OF HARDNESS AND INVESTIGATION OF THE HARDENING PROCESSES OF ORGANIC COATINGS. 13p. 14 refs. DTC-15.
Order from OTS, ETC or DTC $1.10 62-29004

Trans. of Lakokrasochnye Materialy i Ikh Primenenie (USSR) 1962, no. 2, p. 48-52.

DESCRIPTORS: *Organic coatings, *Hardness, Hardening, Experimental data, Vacuum apparatus.

Plath, Lore.
IDENTIFICATION AND DIFFERENTIATION OF UREA AND MELAMINE RESINS BY PAPER-CHROMATOGRAPHIC METHODS (Identifizierung und Unterscheidung von Harnstoffund Melaminharzen mit Hilfe Papierchromatographischer Methoden). Apr 62, 9p.
FPRB Trans. no. 150.
Order from NRCC NRCC C-3974

Trans. of Holz als Roh- und Werkstoff (West Germany) 1961, v. 19, no. 12, p. 489-494.

DESCRIPTORS: *Adhesives, *Amino plastics, *Urea, *Melamine, Identification, Chemical analysis, Microscopy, *Paper chromatography, *Wood, Bonding.

Stefanovich, V.
CEMENTO POLIMERO (Polimertsement) (Polymer-Cement). 5p. CID: 62-170.
Order from OTD, ETC or CID $0.80 62-26819

Trans. in Spanish of Rechnoi Transport (USSR) 1961 [v. 20] no. 4, p. 56.

DESCRIPTORS: *Cements, Polymers.

Sychev, M. M. and Astakhova, M. A.
EFFECT OF FINENESS OF THE LIMESTONE COMPONENT ON THE BURNABILITY OF CEMENT RAW MIXES. [1959] 6p. (figs omitted) 1 ref.
Order from OTS or SLA $1.10 63-10207

Trans. of Tsement (USSR) 1962 [v. 28] no. 3, p. 12-14.

DESCRIPTORS: *Cements, Mixtures, Combustion, Calcium compounds, Carbonates, *Calcite, *Marble, Particles.

Yakhontov, Yu. K.
DETERMINATION OF THE DENSITY OF CONCRETE BY MEANS OF GAMMA RADIATIONS (K Opredeleniyu Plotnosti Betona s Pomoshch'yu Gamma-Izluchenii). Oct 62 [10]p. 3 refs. RTS-2166.
Order from OTS or SLA $1.10 63-15272

Trans. of mono. Doklady Mezhvuzovskoi Konferentsii po Ispitaniyam Sooruzhenii, Leningrad, 1958, p. 255-261.

DESCRIPTORS: Density, *Concrete, *Gamma rays, Radioactive isotopes, Physical properties, Absorption, Collimators, Cobalt, Cesium.

An empirical relationship between the value of the mass absorption coefficient and collimator thickness in measurements in air was determined for Co^{60} and Cs^{137} radiation. The minimum collimator thickness necessary for determining the density of a substance irradiated in air by means of the isotopes Co^{60} and Cs^{137} were also determined. The value of the mass absorption coefficients for Co^{60} and Cs^{137} in the determination of the density of concrete by means of a radiometric fork without collimators and with collimators of minimum thickness, and also the necessary size of the specimens in the irradiation direction were found. (Author)

Oberst, H., Becker, G., and Frankenfeld, K.
THE DAMPING OF FLEXING OSCILLATIONS IN THIN SHEET THROUGH FIRMLY ADHERENT COATINGS. [II. ADVANCES IN THE DEVELOPMENT OF NOISE-REDUCING MATERIALS]. May 63, 7000 words, 12 refs.
Order from TTIS $27.00 TTIS NS 68

Trans. of Acustica (Switzerland) 1954, v. 4, p. 433-[444].
Another trans. is available from OTS or SLA $1.60 as 61-19983, ACSIL Trans-789, [1960] [18]p.

DESCRIPTORS: *Sheets, *Damping, Vibration, Coatings, *Plastic coatings, *Acoustic insulation, Insulating materials, Vehicles, Noise.

For abstract see Technical Translations 6: 57, 1961.

Ceramics and Refractories

Kempf, R.
HOMOGENEOUS BATCH FOR MECHANICAL SHEET GLASS PRODUCTION (Homogenes Gemenge für Maschinelle Tafelglas-Erzeugung). [1962] [5]p. (foreign text included).
Order from SLA $1.10 63-10615

Trans. of Sprechsaal (West Germany) 1962, v. 95, no. 12, p. 347-348.

DESCRIPTORS: *Glass, Sheets, Production, Materials (Physical state), Mixtures, Sand, Dolomite, Calcium compounds, Oxides.

The importance of a homogenous batch for the quality of plate glass is described, the layering of the raw materials, the mixing process, and the danger of segregation being dealt with as vital factors. (Author)

Kida, Katsuzo; Abe, Mitsunobu and others.
ON THE VACUUM HOT PRESSING OF HIGH GRADE BERYLLIA. Sep 60, 20p. 12 refs.
Order from OTS $0.50 AEC-tr-4065

Trans. of Nihon Genshiryoku Gakkaishi (Japan) 1959, v. 1, no. 4, p. 259-271

DESCRIPTORS: *Ceramic materials, *Beryllium compounds, *Oxides, *Material forming, Hot working, Vacuum furnaces, Presses (Machinery) Sintering, Physical properties.

High grade powdered beryllia, obtained through decomposition of Be SO_4 was used as the raw material, from which the beryllia powder compact with the density of 3.00g/cc was obtained (whereas theoretical density is 3.02g/cc). The densification was accomplished through hot pressing in a graphite mould and the heating by induction for 30 minutes at 1,400°C was performed under the pressure of 200 kg/cm^3 in vacuum of 10^{-3} mmHg. The main subject concerned was to find the best condition for the vacuum hot pressing of beryllia, and the characteristics of thus-prepared beryllia has been studied as well. (Author)

Malquori, Giovanni and Cirilli, Vittorio.
THE SINTERING OF MAGNESIA. [1963] 21p. (figs. omitted) 18 refs.
Order from SLA $2.60 63-14584

Trans. of [la] Ricerca Sci[entifica] (Italy) 1939, v. 10, p. 905-914.

DESCRIPTORS: *Magnesium compounds, Oxides, *Sintering, Heat treatment, Mechanical properties, Magnesite, Refractory materials.

The authors examine the influence exerted on the course of the thermal sintering of magnesium oxide by various substances intimately associated with the latter. The behavior of the following was studied: Fe_2O_3, Al_2O_3, SiO_2, CaO, (Fe_2O_3-CaO). (Fe_2O_3-SiO_2), (SiO_2-CaO), (Al_2O_3-CaO), and (Fe_2O_3-CaO-SiO_2), the impurities most frequently present in the oxide produced by thermal decomposition of natural magnesites. (Author)

Weyl, W. A.
A FEW ASPECTS OF THE SURFACE CHEMISTRY OF GLASS. [1962] 27p.
Order from SLA $2.60 62-18142

Trans. of Institut du Verre. Bulletin (France) 1946, no. 3, p. 1-10.
An abstract trans. is available from SLA $1.10 as 62-16754 [1962] [1]p.

DESCRIPTORS: *Glass, Surface properties, Adsorption, Silicates, Atomic structure, X-ray diffraction analysis, Crystal structure, Ions, Ion exchange, Sodium, Hydrogen, Silver, Copper, Zirconium, Water.

The surface condition of glass is modified by the migration of alkaline ions. These surface alkaline ions may be eliminated by the action of furnace gases, or by a treatment with metakaolin (kaolin calcined to 600°). By means of so-called "base exchange" reactions they may be replaced by H or Ag ions, and "hydrogen-glasses" or "silver glasses" are thereby obtained, constituting the starting point for mirroe formation. Organic chlorosilanes may substitute organic radicals for surface hydrogen ions and form hydrophobic glasses. The so-called "captive bubble" method permits the substantiation and evaluation of the adsorption by the glass surface of cations in solution, by means of contact-angle measurements of an air bubble to the glass surface in question. (Author)

Zschimmer, E.
THE PROBLEMS OF THE GLASS THEORY OF TO-DAY. [1963] [12]p.
Order from SLA $1.60 63-14500

Trans. of [Angewandte Chemie] (Germany) 1930, v. 43, p. 122-124.

DESCRIPTORS: *Glass, Theory, Industrial research, Ceramic materials, Melting, Oxides.

Fuels, Lubricants, and Hydraulic Fluids

BURNING OF TWO-PHASE SYSTEMS. [1963] [42]p. (figs. tables formulae omitted) 56 refs.
Order from OTS or SLA $4.60 63-14672

Trans. from mono. Moscow Symposium on Combustion Problems, Institute of Energetics of the Academy of Science, USSR, Moscow, 1958.

DESCRIPTORS: *Fuels, *Combustion, Phase studies, Flame propagation, Jets

Contents:
Experimental study of the burning of a drop of fuel, by L. A. Klyachko
Basic characteristics of burning of a two-phase fuel-air mixture
Concentration limits of the spreading of a flame in a laminar two-phase mixture, by A. K. Rud'ko
Problems of the theory of burning of a stream of fuel, by B. V. Kantorovich

Goodacre, G. L. and Foord, D.
COMPARISON OF THE ANTIKNOCK ACTION OF TETRAETHYLLEAD, TETRAMETHYLLEAD, AND THEIR MIXTURES (CONCLUDING NOTE). [1963] 4100 words.
Order from CTS(Chem) $12.30 CTS(Chem)-332
subsequent copies $2.75/ea.

Trans. of Riv[ista dei] Combustibili (Italy) 1962, v. 16, p. 340-349.

DESCRIPTORS: *Gasoline, *Fuel additives, *Antiknock, Complex compounds, *Lead compounds, Ethyl radicals, Methyl radicals, Mixtures, Physical properties, Chemical properties, Costs

Kovalev, K. L., Ryabov, V. A. and others.
GLASS LUBRICATION FOR HOT MACHINING OF METALS. 10 Apr 63 [4]p. FTD-TT-62-1790.
Order from OTS or SLA $1.10 63-19419

Unedited rough draft trans. of Russian patent 148,190, appl. no. 743,041/23-5, 5 Aug 61.

DESCRIPTORS: *Metals, Hot-working, *Machining, *Lubricants, *Glass, Powders, Silicon compounds, Boron compounds, Aluminum compounds, Calcium compounds, Sodium compounds, Potassium compounds, Oxides, Clay.

The invention concerns a glass lub for hot machining of metals, glass powder base lub, consisting of silicon oxide, boron oxide, aluminum oxide, calcium oxide, sodium and potassium oxides and water, distinguished by the fact, that for the purpose of removing carbon deposition on the surface of the object, the lub includes a refractory clay, soluble glass. (Author)

Lauer, F. J.
THE BEHAVIOR OF PARAFFINS OF LOW OIL-CONTENT AND OF OILS DURING THERMAL CAPILLARY ANALYSIS. [1962] 12p. (fig. omitted) 4 refs.
Order from SLA $1.60 63-10296

Trans. of Fette Seifen Anstrichmittel (West Germany) 1957, v. 59, no. 3, p. 140-142.

DESCRIPTORS: *Oils, Analysis, Liquids, Solids, Viscosity, Gasoline, Temperature, Methanes.

The effects of liquid admixed substances in solid paraffins on the height of rising in thermal capillary analysis are investigated and discussed, taking into consideration the type and quantity of the admixed substances as well as the viscosity and the solidification points of the paraffins. (Author)

Matveevskii, R. M.
EFFECT OF LOW TEMPERATURES ON THE LUBRICITY OF MINERAL OILS. [1963] 5p.
Order from K-H $5.00 K-H 7082 a

Trans. of Akademiya Nauk SSSR. Doklady, 1956, v. 106 [no. 3] p. 494-496.
Another trans. is available from ATS as RJ465.

DESCRIPTORS: Temperature, *Lubricants, *Mineral oils, Physical properties.

Orlov, M. V.
HOW TO ECONOMIZE ON THE AXLE-BOX LUBRICANT. [1963] [4]p. (2 figs. omitted).
Order from OTS or SLA $1.10 63-14001

Trans. of Zheleznodorozhnyi Transport (USSR) 1962 [v. 44, no. 11] p. 79-80.

DESCRIPTORS: *Lubricants, *Axle shafts, Railroad cars, Economics.

Suida, H. and Pöll, H.
INVESTIGATION OF PETROLEUM PRODUCTS BY THE EARTH METHOD. [1962] 3p.
Order from SLA $1.10 63-10700

Trans. of Petroleum Z[eitschrift] (Austria) 1937, v. 33, no. 10, p. 1-2.

DESCRIPTORS: *Petroleum, Chemical analysis, Bleaching agents.

Zalesskii, V. I. and Mikhalenko, F. P.
DETERMINACION DE LA EFECTIVIDAD DE LUBRICANTES PARA ESTIRADO PROFUNDO (Opredelenie Effektivnosti Smazok dlya Glubokoi Vytyashki) (Determination of the Effectiveness of Lubricants Employed in Heavy Duty Drawing). 4p. 2 refs. CID: 62-148.
Order from OTS, ETC or CID $0.75 62-26797

Trans. in Spanish of Vestnik Mashinostroeniya (USSR) 1955 [v. 35] no. 11, p. 53-54.

DESCRIPTORS: *Lubricants, Test methods, *Drawing (Machine processing).

Leather and Textiles

Frotscher, H.
PROBLEMS OF PERMANENT ANTISTATIC FINISHES. May 61 [11]p. 4 refs.
Order from SLA $1.60 62-20023

Trans. of Melliand Textilberichte (West Germany) 1960, v. 41, no. 9, p. 1121-1124.

DESCRIPTORS: *Finishes and Finishing, *Static eliminators, *Fibers (Synthetic), *Cellulose acetates, Static electricity, Cleaning, *Textiles, Clothing.

Glowacki, Jan.
INVESTIGATION OF DIAMETER OF TWISTED PRODUCTS MADE OF BAST AND HARD FIBERS (Badanie Srednicy Wyrobow Skrecanych z Wlokien Lykowych i Twardych) tr. by M. Rojowska. 1963 [9]p. 4 refs. PL-480 Agr.
Order from OTS $0.50 61-11380

Trans. of Instytut Przemyslu Wlokien Lykowych. Prace (Poland) [1959] v. 7, p. 153-158.

DESCRIPTORS: *Fibers, *Threads, Thickness, Measurement, Tensile properties, Microscopy, Micrometers

The main purpose of the present work was to establish the proper method of investigation of diameters of thinner twisted products as threads and strings. The factors taken into consideration were the tensile stress of the product investigated, comparison of methods of measuring diameters and number of measurements and the location of points of such measurements.

Groninger, Kurd G.
NEW METHOD MEASURING MOISTURE. 15 Nov 62 [35]p. 6 refs.
Order from SLA $3.60 63-10803

Trans. of Melliand Textilberichte (West Germany) 1960, v. 41, no. 6, p. 770-779.

DESCRIPTORS: Measurement, *Moisture, Materials, Temperature, *Hygrometers, Textiles, Mechanical properties, *Fibers, Humidity, Absorption, Chemical bonds.

Topics: Effects of moisture; behaviour of materials in conformity with laws of moisture; definition of moisture terms and moisture measuring conditions; the new Sina-equi-Hygro-Scope system; temperature measurements; and applications and future prospects. (Author)

Kageyama, Ikuzo, Katsushima, Atsuo and others.
RESEARCH FOR OIL AND WATER REPELLENTS. [1962] 13p. (figs. tables refs. omitted) 1 ref.
Order from SLA $1.60 62-20485

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1962, v. 65, no. 8 [p. 1207-1210].

DESCRIPTORS: Scientific research, Oils, Water, Textiles, *Protective treatments, *Moisture proofing, Fluorides, Polymers, Chlorides, Coatings, Alkyl radicals, Molecular structure

A series of compounds were synthesized employing $F(CF_2)_n$-, $H(CF_2)_n$-, and $Cl(CF_2CFCl)_mCF_2$ as polyfluoroalkyl radicals (hereinafter will be called Rf) and by combining them with various polar groups. Oil and water repellence of cotton gauze which was coated by proper means with these compounds were measured. The repellency of these compounds were compared regarding the kinds of Rf employed, length of the main chains, and the kinds of polar groups. As regards the kinds of Rf, $F(CF_2)_n$- showed the best water and oil repellence, while the terminal hydrogen atom of $H(CF_2)_n$- displayed unexpectedly great affinity for water and oil. The repellent efficiency of $Cl(CF_2CFCl)_nCF_2$- was in the middle of the above stated two Rf radicals, but it was better than $H(CF_2)_n$- with respect to their fluorine content. Macromolecular compounds that have Rf radicals in their side chains seem to be more advantageous for practical use than simple low-molecular-weight compounds, because the efficiency of $H(CF_2)_n$-, which is low in a low-molecular-weight form, can be improved in a macromolecular form by making its "n" larger. (Author)

Komori, Saburo and Nishio, Takashi.
RESEARCH FOR FLUOROALKYL PERMANENT WATER AND OIL-REPELLENT CHEMICALS. [1962] 7p. (figs. tables formula omitted) 7 refs.
Order from SLA $1.10 62-18697

Trans. of Kogyo Kagaku Zasshi (Japan) 1962, v. 65, no. 3, p. 368-370.

DESCRIPTORS: *Carbamates, *Fluorides, *Alkyl radicals, Cotton textiles, Moistureproofing, *Oils, Resistance, Textiles.

Kononenko, T. V.
USE OF MAN-MADE FIBRES IN THE WOOL INDUSTRY (Ispol'zovanie Khimicheskikh Volokon v Sherstyanoi Promyshlennosti) tr. by B. Ribush. [1962] [6]p. (foreign text included). [CSIRO] Trans. no. 5870.
Order from OTS or SLA $1.10 63-15264

Trans. of [Tekstil'naya Promyshlennost'] (USSR) 1961, v. 21, no. 11, p. 13-14.

DESCRIPTORS: *Fibers (Synthetic), *Woolen textiles, Textile industry, Textiles, Production, Processing.

Lipkov, I. A. and Grechukhina, N. A.
THE USE OF MAN-MADE FIBRE IN THE KNITWEAR INDUSTRY (Primenenie Khimicheskikh Volokon v Trikotazhnoi Promyshlennosti) tr. by B. Ribush. [1962] [14]p. (foreign text included). [CSIRO] Trans. no. 5871.
Order from OTS or SLA $1.60 63-15972

Trans. of [Tekstil'naya Promyshlennost'] (USSR) 1961, v. 21, no. 11, p. 19-23.

DESCRIPTORS: *Fibers (Synthetic), *Textile industry, *Clothing. Production.

Lobanov, V. I.
NUEVA MAQUINA DE ESPADADO PARA LA ELABORACION DEL CAÑAMO DE TALLO LARGO (Novaya Myal'naya Mashina dlya Obrabotki Dlinnostebel'noi Konopli) (New Breaking Machine Employed in the Preparation of Long Stalk Hemp). 8p. CID: 62-112.
Order from OTS, ETC or CID $0.90 62-26761

Trans. in Spanish of Tekstil'naya Promyshlennost' (USSR) 1958 [v. 18] no. 6, p. 10-12.

DESCRIPTORS: *Grinders, *Fibers (Natural).

Malikov, A. D.
TENIDO CONTINUO DE TEJIDOS COMPACTOS, MEDIANTE FILTRADO AL VACIO DEL COLORANTE (Nepreryvnoe Krashenie Plotnykh Tkanei pod Vakuumprososom Krasitelya) (Continuous Dyeing of Compact Fabrics by Vacuum Filtration of the Dye) 12p. CID: 62-113.
Order from OTS, ETC or CID $1.10 62-26762

Trans. in Spanish of Tekstil'naya Promyshlennost' (USSR) 1959 [v. 19] no. 1, p. 52-55.
Another trans. is available in English from LC or SLA mi$1.80, ph$1.80 as 60-15892, RTS-1375, Mar 60 [7]p.

DESCRIPTORS: *Dyes, *Textiles, Processing, Water filters, *Vacuum systems.

Mikhailova, K. K.
NUEVO TELAR AUTOMATICO PARA LINO (Novyi Avtomaticheskii Stanok) (New Automatic Flax Spinning Loom). 8p. CID: 62-115.
Order from OTS, ETC or CID $0.90 62-26764

Trans. in Spanish of Tekstil'naya Promyshlennost' (USSR) 1958 [v. 18] no. 2, p. 37-38.

DESCRIPTORS: *Textiles, *Automation, Industrial equipment.

Nagata, Akira; Nemoto, Yoshio, and Kimura, Wasaburo.
APPLICATION OF AMPHOTERIC SURFACE ACTIVE AGENTS IN TEXTILE INDUSTRY. PT. IV. MEASUREMENT OF THE DRAWING FRICTIONAL COEFFICIENT OF SYNTHETIC FIBERS TREATED WITH AMPHOTERIC SURFACE ACTIVE AGENTS. [1962] 12p. 17 refs.
Order from SLA $1.60 63-10323

Trans. of Yukagaku (Japan) 1962, v. 11, p. 24-28.

DESCRIPTORS: *Fibers (Synthetic), *Acrylonitriles, *Surface-active substances, Friction, Textiles, Processing.

It was observed that amphoterics were effective as antistatic agents and softeners without affecting dyeing. To investigate the adaptability of ampholytics as oiling agent, the drawing friction of "Vonnel" fibers treated with them was measured. Minimum values of friction were observed at the concentrations between 0.03 and 0.16% of 1-oxyethyl-2-heptadecyl imidazolinium betaine, 0.07 and 0.1% of N-lauryl-N, N-dimethyl-α-betaine and 0.2 and 0.4% of oleic acid. For the oiling of "Vonnel", much smaller quantities of ampholytics are required as compared with oleic acid. (Author)

Nemeth, E[ndre].
DAMAGE CAUSED TO FABRICS BY SEWING (Varras Okozta Szovetserulesek). Detail from the paper "Sewing Strength". [16 Apr 62] [22]p.
Order from SLA $2.60 63-10801

Trans. of Magyar Textiltechnika (Hungary) 1955, no. 8, p. 288-293.

DESCRIPTORS: *Sewing machines, *Textiles, Fibers, Threads, Damage, Degradation, Tensile peoperties.

Popov, S. G.
HORIZONTAL PULL ON A YARN BY AN AIR JET [PT. I]. 9 Aug 62, 5p. 2 refs. [Trans] T.1425; [DSIR] NLL M.10009.
Order from OTS or SLA $1.10 63-15213

Trans. of Tekstil'naya Promyshlennost' (USSR) 1961 [v. 21] no. 5, p. 57-59.

DESCRIPTORS: *Fibers, *Air, *Jets, Nozzles, Velocity, Dynamics.

Popov, S. G.
HORIZONTAL PULL ON A YARN BY AN AIR JET [PT. II]. 24 July 62, 5p. 2 refs. [Trans] T.1426; [DSIR] NLL M.10010.
Order from OTS or SLA $1.10 63-15212

Trans. of Tekstil'naya Promyshlennost' (USSR) 1961 [v. 21] no. 10, p. 47-49.

DESCRIPTORS: *Fibers, *Air, *Jets, Velocity, Dynamics.

(See also 63-15213)

Rostovtsev, V. E. and Trakhtenberg, R. M.
LA ELECTROTINTURA DE LOS TEJIDOS POR ACCION DE CORRIENTE ELECTRICA (Krashenie Tkanei Pod Deistviem Elektricheskogo Toka) (Textile Electrodyeing by an Electric Current) 15p. CID: 62-193.
Order from OTS, ETC or CID $1.20 62-26842

Trans. in Spanish of Tekstil'naya Promyshlennost' (USSR) 1959 [v. 19] no. 4, p. 55-58.
Another trans. is available in English from LC or SLA mi$1.80, ph$1.80 as 60-13853, Courtaulds ML-3038, 17 Sep 59, 8p.

DESCRIPTORS: *Dyes, *Textiles, *Electric currents, Processing.

Rozinskaya, I. I.
METODO DE TENIDO POR SUSPENSION, DE TEJIDOS DE PUNTO (Suspenzionnyi Metod Krasheniya Trikotazhnogo Polotna) (Suspension Dyeing of Knitted Fabrics). 9p. CID: 62-151.
Order from OTS, ETC or CID $0.95 62-26800

Trans. in Spanish of Tekstil'naya Promyshlennost' (USSR) 1960 [v. 20] no. 2, p. 48-50.

DESCRIPTORS: *Dyes, *Textiles, Processing.

Samoilov, V. P. and Korolev, V.
LA VENTILACION COMBINADA EN LAS FABRICAS DE LINO (Sovmeshchennaya Ventilyatsiya na L'nozavodakh) (Ventilation in Flax Processing Plants). 7p. CID: 62-169.
Order from OTS, ETC or CID $0.90 62-26818

Trans. in Spanish of Tekstil'naya Promyshlennost' (USSR) 1961 [v. 21] no. 2, p. 42-43.

DESCRIPTORS: *Ventilation, *Industrial plants, Fibers, Textiles.

Scarniet-Bolette, L.
SWELLING OF YARNS. 11 Apr 62 [8]p.
Order from SLA $1.10 63-10794

Trans. of Ann[ales] Sci[entifiques] Text[iles] Belges, 1961 [v. 9] no. 3, p. 63-68.

DESCRIPTORS: *Fibers, Fibers (Synthetic), Mechanical properties.

A description is given of an apparatus for the measurement of the specific volume of yarns. The results of some experiments performed on this apparatus are described: variation of specific volume with yarn number and twist. Comparison is made between specific volume of wool yarns and high bulk acrylic yarns. (Author)

Shigorin, D. N., Pomerantsev, N. M., and Sumin, L. V.
DISTINCTIVE FEATURES OF THE PROTON MAGNETIC RESONANCE SPECTRA OF α AND β FORMS OF POLYPEPTIDE CHAINS (Osobennosti Spektrov Magnitnogo Rezonansa Protonov α - i β - Form Polipeptidnykh Tsepei) tr. by L. V. Sumin. [1962] [7]p. (foreign text included) 7 refs. [CSIRO Trans.] 5867.
Order from OTS or SLA $1.10 63-15262

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1961, v. 3, no. 4, p. 560-561.

DESCRIPTORS: *Fibers (Natural), Woolen textiles, Hair, Silk, *Fibers (Synthetic), Polyamide plastics, *Peptides, Protons, *Nuclear magnetic resonance, Resonance absorption.

Sippel, Arnulf.
DEPENDENCE OF THE TENSILE STRENGTH OF FILAMENTS ON THEIR GAUGE LENGTH. IV. INTERPRETATION OF THE CONSTANTS (Zur Abhängigkeit der Reissfestigkeit von Fäden von der Einspannlange. IV. Zur Deutung der Konstanten). 31 Apr 62, [6]p. 4 refs.
Order from SLA $1.10 63-10809

Trans. of Faserforschung und Textiltechnik (Germany) 1960, v. 11, no. 5, p. 219-220.

DESCRIPTORS: *Fibers (Synthetic), Tensile properties, Threads, Equations.

Tada, Yoshitero.
CREMONA "MANRYO" VINYLON FISH NETS AND ROPES. [1962] [17]p.
Order from SLA $1.60 62-20094

Trans. of Sen-i Kai [sic] 1957, v. 16, no. 174, p. 64-68.

DESCRIPTORS: *Fibers (Synthetic), *Vinyl plastics, Fishes, *Nets, Cordage, Mechanical properties.

Cremona "Manryo" and Cremona "Manryo No. 5" which are Vinylon products, and fishing nets and ropes prepared from them are discussed briefly, their properties and uses are described. It may be predicted that cotton and Manila hemp will be completely replaced by the synthetic fibers in the future, and that cotton and hemp will no longer be used in the fishing industry. This use of synthetic fibers is advantageous not only for the fishermen, but also for the nation because it reduces the consumption of the imported raw materials: cotton and Manila hemp. (Author)

Paints and Finishes

GRANULATED PIGMENTS FOR THE PAINT INDUSTRY. May 63, 2800 words.
Order from TTIS $24.00 TTIS NS 72

Trans. of Lakokrasochnye Materialy i Ikh Primenenie (USSR) 1962, no. 3, p. 32-34.

DESCRIPTORS: *Pigments, Particles, *Paints, Industries.

Freidin, M. M.
THE EFFECT OF THE HIGH-VOLTAGE CURRENT SUPPLY SOURCES ON THE ELECTROSTATIC SPRAYING OF PAINTS. May 63, 1100 words.
Order from TTIS $12.00 TTIS NS 69

Trans. of Lakokrasochnye Materialy i Ikh Primenenie (USSR) 1962, no. 1, p. 54-56.

DESCRIPTORS: *Electric potential, Electric currents, *Electric power production, *Sprays, Electrostatics, Paints.

Funke, W.
TESTING PAINTS AT DIFFERING TEMPERATURES AND HUMIDITIES. May 63, 3000 words.
Order from TTIS $27.00 TTIS NS 80

Trans. of Farbe und Lack (West Germany) 1963, v. 69 [no. 2] p. 80-87.

DESCRIPTORS: *Paints, Temperature, Humidity, Nitrocellulose, Epoxy resins, Alkyd resins, Vinyl radicals, Acetates, *Finishes, *Hardness, *Adhesion, Mechanical properties.

Gubenskii, V. A. and Serebryanikov, S. N.
THE ELECTROSTATIC SPRAYING OF BENTWOOD CHAIRS. May 63, 3000 words.
Order from TTIS $27.00 TTIS NS 70

Trans. of Lakokrasochnye Materialy i Ikh Primenenie (USSR) 1962, no. 1, p. 44-49.

DESCRIPTORS: *Paints, *Sprays, *Furniture, Electrostatics.

Gurevich, I. M.
SOBRE UNA UTILIZACION MAS AMPLIA DE LAS PINTURAS ACETILENICAS ANTICORROSIVAS (Shire Primenyat Antikorroziinye Etinolevye Kraski) (Extensive Utilisation of Anti-corrosive Acetylene Base Paints) 8p. CID: 62-139.
Order from OTS, ETC or CID $0.85 62-26788

Trans. in Spanish of Rechnoi Transport (USSR) 1955 [v. 14] no. 8, p. 17.

DESCRIPTORS: Corrosion inhibition, *Organic coatings, *Acetylenes, Paints.

Mikhail, R. Aleksandru, L. and others.
TEREFTALATO DE POLIETILENO MODIFICADO, PARA BARNICES ELECTROAISLANTES (Modifitsirovanyi Poliétilentereftalat dlya Elektroizolyatsionnykh Lakov) (Modified Polyethylene Terephtalate in Electric Insulating Varnishes). 12p. 2 refs.
CID: 62-188.
Order from OTS, ETC or CID $1.10 62-26837

Trans. in Spanish of #Zhurnal Prikladnoi Khimii (USSR) 1960 [v. 33] no. 10, p. 2336-2340.

DESCRIPTORS: Insulating materials, *Varnishes, *Ethylenes, *Polymers, *Electric insulation, *Polyethylene plastics, *Phthlates.

Wagner, K. and Mennicken, G.
ALIPHATIC ISOCYANATES AS RAW MATERIAL FOR THE PREPARATION OF COATINGS. [1962] 6p. (figs. omitted).
Order from SLA $1.10 63-10653

Trans. of F[édération d'] A[ssociations de] T[echniciens des] I[ndustries de] P[eintures, Vernis, Emaux et Encres d'Imprimerie de l'] E[urope] C[ontinentale. Comptes Rendus du] Congrès (France) 1962, no. 6, p. 289-292.

DESCRIPTORS: *Aliphatic compounds, *Isocyanates, Synthesis (Chemistry), *Varnishes, *Isocyanate plastics, Urethanes, Coatings, Plastic paints.

Photographic Materials

Berty, I.
A DIFFUSION PHENOMENON OBSERVED IN CONNECTION WITH THE DEVELOPMENT OF COLOR PAPERS. [1963] 10p.
Order from ATS $14.75 ATS-79Q68H

Trans. of Kep es Hangtechnika (Hungary) 1961, v. 7, no. 6, p. 161-165.

DESCRIPTORS: Diffusion, Colors, *Photographic paper, *Color photography.

Hellmig, E.
COLOR IMPROVEMENTS IN THE AGFACOLOR NEGATIVE-POSITIVE PROCESS WITH COLORED MASKS. [1962] 48p. (figs. omitted).
Order from SLA $4.60 62-14405

Trans. of AGFA [Aktiengesellschaft für Photofabrikation, Leverkusen. Mitteilungen aus den Forschungslaboratorien der A G F A Leverkusen-München (Germany) 1955] v. 1, p. 199-238.

DESCRIPTORS: *Color film, Pigments, Color Photography Colors, Photographic chemicals.

It was shown in what way the so-called secondary densities of the color negative pigment affect the reproduction of color in a color copy (color distortion by whitening, blackening, loss in saturation or brightness and shifts in color tone). In one important example, which lies very close to actual practice, (purple with high secondary density in the blue spectral region) theory and operation is explained for colored masks. Practical instructions and formulas for color masking are also given for this practical case. Operation and production of other masks (purple masks, "mixed" masks) is also shown. Finally, the application of colored masks to remove unbalance in color films or papers is explained and the field of application for masks given. (Author)

Plastics

HIGHLY ACTIVE AND HIGHLY STEREOSPECIFIC CATALYSTS FOR THE POLYMERIZATION OF ALPHA-OLEFIN HYDROCARBONS. [1963] 2800 words.
Order from CTS(Chem) $11.20 CTS(Chem)-331
subsequent copies $1.80/ea.

Trans. of Italian patent 600,817, filed 23 Dec 58, granted 17 Dec 59, by Montecatini Società Generale per l'Industria Mineraria e Chimica.

DESCRIPTORS: *Polyethylene plastics, Synthesis, Ethylenes, Polymerization, *Catalysts, *Metalorganic compounds, Complex compounds, Aluminum compounds, Titanium compounds, *Ziegler catalysts, Stereochemistry

STIVE PVC-PLADER (Vinyl Chloride Polymer Rigid Sheeting). 7p. DTC-13.
Order from OTS, ETC or DTC $0.90 62-29003

Unedited draft trans. in Danish of Russian Standard GOST9639-61, gr. L27.

DESCRIPTORS: *Polyvinyl chloride, *Polymers, Sheets, Physical properties, Mechanical properties.

Bel'kevich, P. I.
PEAT PLASTICS: A NEW BUILDING MATERIAL (Torfoplastiki: Novyi Stroitelnyi Material). Apr 63 [5]p. 3 refs. RTS-2223.
Order from OTS or SLA $1.10 63-15967

Trans. of Torfyanaya Promyshlennost' (USSR) 1962 [v. 39] no. 5, p. 17-19.

DESCRIPTORS: *Peat, *Plastics, Buildings, Materials, Manufacturing methods, Structural properties, Mechanical properties, Thermoplastics, Electric insulation, Floors.

The article describes the peat plastics obtained under laboratory conditions from milled peat as a substitute for oak parquet and facing tiles. (Author)

Fior, Aldo and Malfetti, Luciano.
A PROCESS AND APPARATUS FOR IMPROVING THE MECHANICAL PROPERTIES OF THERMOPLASTIC FILMS. [1962] [20]p.
Order from OTS or SLA $1.60 63-10790

Trans. of Belgian patent 573,406, by Montecatini, General Society for Mineral and Chemical Industry and Karl Ziegler, (priority of two patent appl. filed in Italy, 29 Nov 57, 17,144 and 7 Oct 53, 13,434 in the name of Montecatini, General Society for Mineral and Chemical Industry).
Another trans. is available from OTS or SLA $1.10 as 62-20418 [1962] 10p.

DESCRIPTORS: *Thermoplastics, *Films, *Mechanical properties, *Stretch forming, Machines, Design, Polyethylene plastics, Propenes.

Flocke, H. A.
MECHANICAL RELAXATION OF POLYETHYLENE, POLYPROPYLENE AND MIXED POLYMERS.
9 July 62, 18p. (figs. omitted) 21 refs.
Order from SLA $1.60 63-10824

Trans. of Kolloid-Zeitschrift (West Germany) 1962, v. 180, no. 2, p. 118-126.

DESCRIPTORS: *Polyethylene plastics, *Propenes, Polymers, Mixtures, Mechanical properties, Vibration, Damping, Crystallization.

The relaxation of polyethylene, polypropylene of different tacticity, mixtures from both of these polymers, as well as of mixed polymers from propylene and ethylene was investigated within a temperature range of -180°C. to 160°C. by the torsional vibration method of Schmieder and Wolf. While for polymer mixtures simple mixing rules are given for the slip modulus and damp-

ing, the mixed polymers of the same chemical composition show a complex behavior, which is discussed with the aid of measured curves. Moreover, the relation of a slowly cooled low-pressure polyethylene sample was compared with that of a quenched sample. For polyethylene a time-dependent recrystallization was demonstrated. (Author)

Furukawa, Junji and Kimura, Teruko.
THERMOSTABILITY OF POLYVINYL CHLORIDE RESINS. [1963] 7p. (figs. omitted) 3 refs.
Order from SLA $1.10 63-14157

Trans. of [Kogyo Kagaku Zasshi] (Japan) 1952, v. 55, p. 133-134.

DESCRIPTORS: *Polyvinyl chloride, *Plastics, Stability, Decomposition.

An investigation from the point of view of stabilizers which prevent radical decomposition.

Horeni, A., Chytry, V., and Dolczel, B.
THE RESISTANCE OF EPOXY AND POLYESTER RESINS TO ACIDS AND ALKALIS. May 63, 750 words.
Order from TTIS $6.00 TTIS NS 78

Trans. of Chemicky Prumysl (Czechoslovakia) 1963, v. 13[(38) no. 3] p. 165-167.

DESCRIPTORS: *Epoxy resins, *Polyester plastics, *Acids, *Hydroxides, Castings, Surfaces, Electrolytes, Dyes, Penetration.

Hummel, Dieter.
IDENTIFICATION OF PLASTIC MATERIALS, SYNTHETIC RESINS AND THEIR PRODUCTS BY MEANS OF THEIR INFRA-RED SPECTRA. [1963] 14p. (figs. omitted) 33 refs.
Order from SLA $1.60 63-14168

Trans. of Kunststoffe (West Germany) 1956, v. 46, no. 10, p. 442-450.

DESCRIPTORS: *Plastics, Materials, Identification, *Infrared spectroscopy, *Spectrum analyzers, *Plastic paints.

The theoretical and practical limitations of IR spectroscopy are taken up a system for the infrared analysis of synthetics and paints is reported.

Kiselev, Boris Abramovich.
GLASS PLASTICS: MATERIAL OF THE FUTURE. 24 Apr 63, 57p. 19 refs. JPRS: 18890.
Order from OTS $1.50 63-21669

Trans. of mono. Stekloplasty - Material Budushchego, Moscow, 1959, 63p.

DESCRIPTORS: *Glass textiles, Fibers (Synthetic), Mechanical properties, Production, Filaments, *Binders, *Plastics, Material forming.

These new construction materials, composed of two basic components glass fiber and a binder of synthetic resins possess a combination of remarkable qualities: great tensile strength, light weight, excellent electric insulating characteristics, high in heat resistance and chemical resistance. This book described the principle characteristics of glass fiber, binders, and glass plastics based on them as well as the methods of making items out of glass plastics and the basic fields of their application.

Mienes, Karl.
PERFECTING MATERIALS AND TECHNIQUES IN THE HIGH-POLYMER FIELD. From a lecture at the Symposium on Macromolecular Materials of the Swiss Chemical Society, Zurich, 11 Oct 58. [1963] 12p. (figs. omitted) 16 refs.
Order from SLA $1.60 63-14181

Trans. of Kunststoffe (West Germany) 1958, v. 48, no. 11, p. 499-504.

DESCRIPTORS: *Plastics industry, *Thermoplastics, Elastomers, Polymers, Material forming, Mixtures, Polymerization, *Expanded plastics.

The plastics industry is increasingly preoccupied with adapting high-polymer qualities to technical procedures and the requirements of practical use. This report presents examples of new developments and discusses processes adapted to the peculiarities of the improved products. (Author)

Oberst, H. and Bohn, L.
MECHANICAL SHORT AND LONG-TIME BEHAVIOR OF CRYSTALLINE POLYOLEFINS: RELAXATION SPECTRA OF LOW-PRESSURE POLYETHYLENE AND POLYPROPYLENE. [1962] [27]p. 18 refs.
Order from SLA $2.60 63-10799

Trans. of Rheologica Acta (West Germany) [1958] v. 1, no. 4/6, p. 608-617.

DESCRIPTORS: *Polyethylene plastics, *Propenes, Polymers, Mechanical properties, Stresses, Relaxation time, Vibration, Spectrographic analysis

Rossi, C. and Bianchi, U.
THERMODYNAMIC PROPERTIES OF HIGH POLYMERS: INTERNAL PRESSURE. Paper presented at the International Congress on Plastics (no. 14) Turin, 26-29 Sep 62. [1963] 3250 words, 16 refs.
Order from CTS(Chem) $13.00 CTS(Chem)-323
subsequent copies $2.25/ea.

Trans. of [Ia] Chimica e [I']Industria (Italy) 1962, v. 44, no. 12, p. 1362-1366.

DESCRIPTORS: *Polymers, Plastics, Physical properties, *Thermodynamics, Pressure, Phase transitions. Melting, Elasticity

[Scheiber, Johannes].
CONDENSATION RESINS. 28 Nov 61, 2p. 16 refs.
Order from SLA $1.10 63-10893

Trans. from mono. Chemie und Technologie der Kunstlichen Harze (Chemistry and Technology of Synthetic Resins) [Stuttgart, 1943] p. 532.
Complete foreign text available from SLA mi$6.00, ph$67.00, 667p.

DESCRIPTORS: Plastics, Condensation, *Molding materials, *Phenolic plastics, Power equipment parts.

Schimke, Fred.
THE PREPARATION OF POLYCARBONATES BY THE SOLUTION PROCESS. [1962] 4p. 24 refs.
Order from SLA $1.10 63-10279

Trans. of Journal für Praktische Chemie (East Germany) 1962 [ser. 4] v. 17 [no. 1/2] p. 107-112.

DESCRIPTORS: *Polyester plastics, *Carbonates, Polymers, Synthesis, Phosgene

A procedure for the preparation of high molecular weight polycarbonates is described, according to which dihydroxy compounds which have been subjected to no special rigorous purification can be reacted. The possible course of the reaction is indicated. (Author)

Schulz, G. V. and Loehmann, H. J.
THE KINETICS OF THE HYDROLYTIC DECOMPOSITION OF CELLULOSE. Rept. 261 on the Macromolecular Compounds. [1963] 81p. 58 refs.
Order from SLA $8.10 63-14160

Trans. of Journal für Praktische Chemie (Germany) 1941, v. 157, p. 238-282.
A partial trans. (p. 246-248, 258-259, 262-264) is available from SLA $1.10 as 63-10214 [2 Dec 60] 10p.

DESCRIPTORS: *Cellulose, Decomposition, Hydrolysis, Stereochemistry, Molecular structure, Phosphoric acids, *Cellulose acetates, *Reaction kinetics.

Seifert, Karl.
THE DETERMINATION OF PHENOLIC RESINS IN HARDBOARD AND PARTICLE BOARD. [1963] [19]p.
Order from SLA $1.60 63-10945

Trans. of Holz als Roh- und Werkstoff (West Germany) 1958, v. 16, no. 9, p. 335-340.

DESCRIPTORS: *Phenolic plastics, Plastics, *Lignin, Reagents, *Fiberboard, Paper, Plywood, Laminates, Chemical analysis.

Teuter, Hans.
PRINTING ON NON-ABSORBENT PRINTING CARRIERS, ESPECIALLY PLASTIC FILMS. 24 July 62, 16p.
Order from SLA $1.60 63-10846

Trans. of German language reprint article from unidentified source, n.d.

DESCRIPTORS: *Printing, Lithography, *Cellulose acetates, *Polyamide plastics, *Polyvinyl chloride, *Polyethylene plastics, *Polyester plastics, Ink, *Adhesion, Absorption (Physical), Containers.

Wick, Georg and König, Helmut.
VESTOLIT S: A SUSPENSION-PVC. 16 July 57, 5p. (figs. tables omitted) 7 refs.
Order from SLA $1.10 63-14175

Trans. of Kunststoffe (West Germany) 1957, v. 47, no. 6, p. 299-302.

DESCRIPTORS: *Polyvinyl chloride, Colloids, Polymerization, Mechanical properties.

Vestolite S is a suspension PVC of many uses. It supplements the emulsion types predominating until now in Germany and makes possible the drawing in of more fields of use to the PVC area. While the higher degrees of polymerization with K values between 70 and 80 are for the most part reserved to processing with plasticizers, material of average K values between 50 and 65 are suitable for processing without plasticizer, so that they present new possibilities and variations in the production of pipes, foils and flatware. (Author)

Wolfram, E.
ADHESION OF LIQUIDS TO SURFACES OF PLASTICS. 23 Dec 62, 24p. (figs. omitted) 43 refs.
Order from SLA $2.60 63-10890

Trans. of Kolloid-Zeitschrift (West Germany) 1962, v. 182, no. 1/2, p. 75-85.

DESCRIPTORS: *Adhesion, Liquids, Surfaces, *Plastics, Organic materials, *Polymers, Surface tension, Surface properties.

Ziegler, Karl.
PROCESS FOR THE POLYMERIZATION OF OLEFINS AND SOLID OLEFIN POLYMERS. [1963] 2850 words.
Order from CTS(Chem) $11.40 CTS(Chem)-330
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Trans. of Italian patent 537,164, filed 30 June 55, granted 19 Dec 55, by Montecatini Società Generale per l'Industria Mineraria e Chimica.

DESCRIPTORS: *Polyethylene plastics, Synthesis, Ethylenes, Propenes, Butenes, Polymerization, Metal-organic compounds, Complex compounds, *Ziegler catalysts.

Rubber and Elastomers

Baldi, L. and Zannetti, R.
SULFUR SOLUBILITY AND DIFFUSIVITY IN ETHYLENE-PROPYLENE AND ETHYLENE-BUTENE-1 COPOLYMERS. [1963] 1500 words, 6 refs.
Order from CTS(Chem) $6.00 CTS(Chem)-322
subsequent copies $1.00/ea.

Trans. of [la] Chimica e [l']Industria (Italy) 1962, v. 44, no. 12, p. 1350-1353.

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Seifert, Karl.
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DESCRIPTORS: *Printing, Lithography, *Cellulose acetates, *Polyamide plastics, *Polyvinyl chloride, *Polyethylene plastics, *Polyester plastics, Ink, *Adhesion, Absorption (Physical), Containers.

Wick, Georg and König, Helmut.
VESTOLIT S: A SUSPENSION-PVC. 16 July 57, 5p. (figs. tables omitted) 7 refs.
Order from SLA $1.10 63-14175

Trans. of Kunststoffe (West Germany) 1957, v. 47, no. 6, p. 299-302.

DESCRIPTORS: *Polyvinyl chloride, Colloids, Polymerization, Mechanical properties.

Vestolite S is a suspension PVC of many uses. It supplements the emulsion types predominating until now in Germany and makes possible the drawing in of more fields of use to the PVC area. While the higher degrees of polymerization with K values between 70 and 80 are for the most part reserved to processing with plasticizers, material of average K values between 50 and 65 are suitable for processing without plasticizer, so that they present new possibilities and variations in the production of pipes, foils and flatware. (Author)

Wolfram, E.
ADHESION OF LIQUIDS TO SURFACES OF PLASTICS. 23 Dec 62, 24p. (figs. omitted) 43 refs.
Order from SLA $2.60 63-10890

Trans. of Kolloid-Zeitschrift (West Germany) 1962, v. 182, no. 1/2, p. 75-85.

DESCRIPTORS: *Adhesion, Liquids, Surfaces, *Plastics, Organic materials, *Polymers, Surface tension, Surface properties.

Ziegler, Karl.
PROCESS FOR THE POLYMERIZATION OF OLEFINS AND SOLID OLEFIN POLYMERS. [1963] 2850 words.
Order from CTS(Chem) $11.40 CTS(Chem)-330
subsequent copies $1.90/ea.

Trans. of Italian patent 537,164, filed 30 June 55, granted 19 Dec 55, by Montecatini Società Generale per l'Industria Mineraria e Chimica.

DESCRIPTORS: *Polyethylene plastics, Synthesis, Ethylenes, Propenes, Butenes, Polymerization, Metal-organic compounds, Complex compounds, *Ziegler catalysts.

Rubber and Elastomers

Baldi, L. and Zannetti, R.
SULFUR SOLUBILITY AND DIFFUSIVITY IN ETHYLENE-PROPYLENE AND ETHYLENE-BUTENE-1 COPOLYMERS. [1963] 1500 words, 6 refs.
Order from CTS(Chem) $6.00 CTS(Chem)-322
subsequent copies $1.00/ea.

Trans. of [la] Chimica e [l']Industria (Italy) 1962, v. 44, no. 12, p. 1350-1353.

DESCRIPTORS: *Synthetic rubber, *Vulcanization, *Sulfur, Solubility, Diffusion, *Polyethylene plastics, Ethylenes, Propenes, Butenes, Polymers

Junghanns, E., Gumboldt, A., and Bier, G.
POLYMERIZATION OF ETHYLENE AND PROPYLENE TO AMORPHOUS COPOLYMERIZED STATES WITH CATALYSTS WITH VANADIUM OXYCHLORIDE AND ALUMINUM HALOGEN ALKYLS (Polymerisation von Äthylen und Propylen zu Amorphen Copolymerisaten mit Katalysatoren aus Vanadiumoxychlorid und Aluminiumhalogenalkylen). [1963] [22]p. (foreign text included) 13 refs.
Order from SLA $2.60 63-10948

Trans. of Makromolekulare Chemie (Switzerland) 1962, v. 58, no. 1, p. 18-42.

DESCRIPTORS: *Synthetic rubber, *Polyethylene plastics, *Ethylenes, *Propenes, Polymerization, Reaction kinetics, *Ziegler catalysts, *Aluminum compounds, Halogens, Alkyl radicals, *Vanadium compounds, Oxychlorides, Catalysis.

Wood and Paper

PAPER AND BOARD: DETERMINATION OF BURSTING STRENGTH. Dec 62, 12p.
Order from SLA $1.60 63-10747

Trans. of Rumanian standard STAS 4741-55 (partly replaces STAS 106-49).

DESCRIPTORS: *Paper, Fiberboard, Rupture, Tests, Test equipment.

Aaltio, E. A.
THE EFFECT OF HIGHLY BEATEN BIRCH PULP FRACTION ON THE PROPERTIES OF KRAFT PAPER. [1962] 6p. (figs. tables [refs.] omitted).
Order from SLA $1.10 63-10490

Trans. of Paperi ja Puu (Finland) 1962, v. 44, no. 4a, p. 217-222.

DESCRIPTORS: *Wood pulp, *Paper, Sulfate pulp.

Darovskii, B. S.
EL PERFECCIONAMIENTO DEL ESTAMPADO DE ARTICULOS DEL CARTON (Usovershenstvovanie Shtampovki Izdelii iz Kartona) (Develoments in Cardboard Goods Stamping). 18p. CID: 62-142.
Order from OTS, ETC or CID $1.30 62-26791

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1955 [v. 30] no. 1, p. 25-27.

DESCRIPTORS: *Paper, Dies, Processing, Printing.

Dibrova, A. T.
UN METODO RAPIDO DE DETERMINAR LA HUMEDAD DEL PAPEL (Skorostnoi Metod Opredeleniya Vlazhnosti Bumagi) (Rapid Method for Paper Moisture Determination) 6p. 4 refs. CID: 62-143.
Order from OTS, ETC or CID $0.85 62-26792

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1956 [v. 31] no. 8, p. 14-15.

DESCRIPTORS: *Paper, *Humidity, Determination, Moisture.

Eliashberg, M. G., Parfenova, A. I. and Tikhomirova, E. V.
NUEVOS DATOS SOBRE LA TEORIA DE LA COCCION SULFITICA DE LA PASTA Y SU IMPORTANCIA PRACTICA (Novye Dannye po Teorii Sul'fitnoi Varki Tsellylozy i Ikh Znachenie dlya Praktiki) (New Data on the Theory of Wood Pulp Sulfite Boiling and Their Practical Importance) 15p. 8 refs. CID: 62-146.
Order from OTS, ETC or CID $1.20 62-26795

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1955, v. 30, no. 10, p. 5-7.

DESCRIPTORS: *Wood pulp, *Boiling, *Sulfites, Theory.

Erashova, N. A.
METODO DE DETERMINACION RAPIDA DE LA HUMEDAD DEL PAPEL (Metod Bystrogo Opredeleniya Vlazhnosti Bumagi) (Paper Moisture Determination Method). 13p. 1 ref. CID: 62-149.
Order from OTS, ETC or CID $1.10 62-26798

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1957, v. 32, no. 6, p. 17-19.

DESCRIPTORS: *Humidity, *Paper, Determination, Moisture.

Flis, I. E.
NUEVO METODO DECOLORANTE DIOXIDO DE CLORO (Dvuokis'Khlora - Novoe Otbelivayushchee Veshchestvo) (New Chlorine Dioxide Bleaching Process). 23p. 40 refs. CID: 62-172.
Order from OTS, ETC or CID $1.55 62-26821

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1956 [v. 31] no. 8, p. 9-13.

DESCRIPTORS: *Bleaching agents, *Chlorine compounds, Oxides, Processing, Wood pulp.

Gromov, V. S. and Odintsov, P. N.
COCCION DE LA PASTA DE MADERA DE RAMAJE Y PAJA CON DISOLVENTES HIDROTROPICOS (Varka Tsellylozy iz Listvennoi Drevesiny i Solomy s Gidrotropnymi Rastvoritelyami) (Cooking of Twig and Straw Wood Pulp with Hydrotropic Solvents). 17p. 11 refs. CID: 62-137.
Order from OTS, ETC or CID $1.30 62-26786

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1957 [v. 32] no. 6, p. 11-14.

DESCRIPTORS: *Organic solvents, *Wood pulp, Straw.

Karpov, A. A.
PURIFICACION DEL AGUA EN LA FABRICACION DEL PAPEL PARA CONDENSADORES (Ochistka Vody pri Proizvodstve Kondensatornoi Bumagi) (Water Purification in Condenser Paper Manufacture) 8p. CID: 62-130.
Order from OTS, ETC or CID $0.90 62-26779

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1955 [v. 30] no. 8, p. 15-18.

DESCRIPTORS: *Water, Purification, *Paper, Capacitors.

Korda, Josef.
OLD THEORIES AND MODERN VIEWS ON BEATING. Nov 62, 9p. 42 refs.
Order from SLA $1.10 63-10525

Trans. of Papir a Cellulosa (Czechoslovakia) 1961 [v. 16] p. 18-21.

DESCRIPTORS: *Paper, Cellulose, Fibers, Water, Hydrogen, Bonding, Absorption, Surface properties, Electrical double layer, Adhesion.

Korovina, Z. P.
SOBRE EL CALCULO DE LA PRODUCTIVIDAD DEL TRABAJO EN LAS EMPRESAS DE LA INDUSTRIA CELULOSA-PAPEL (Ob Izmerenii Proizvoditel'nosti Truda na Predpriyatiyakh Tsellyulozno-Bumazhnoi Promyshlennosti) (Work Productivity Estimation in the Cellulose-Paper Industry) 6p. CID: 62-129.
Order from OTS, ETC or CID $0.85 62-26778

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1958 [v. 33] no. 5, p. 24-25.

DESCRIPTORS: *Paper industry, Industrial production, *Cellulose.

Larin, P. S. and Nagrobskii, I. A.
DISMINUCION DEL CARACTER RESINOSO DE LA PASTA DE PAPEL Y ELIMINACION DE LAS PROPIEDADES PERJUDICIALES DE LA RESINA (Snizhenie Smolistosti Tsellylozy i Ustranenie Vrednykh Svoistv Smoly) (Decrease of the Resinous Character of Wood Pulp and Elimination of the Obnoxious Properties of Resin). 15p. 11 refs. CID: 62-101.
Order from OTS, ETC or CID $1.20 62-26750

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1956 [v. 31] no. 10, p. 3-5.

DESCRIPTORS: Paper, *Wood pulp, *Resins.

Lechner, Richard.
PENTOSANS FROM WOOD AND THEIR USE IN FERMENTATION. [1963] 25p. 11 refs.
Order from SLA $2.60 63-14107

Trans. of Papier-Fabr[ikant] (Germany) 1940, v. 38 [no. 48/49] p. 294-299.

DESCRIPTORS: *Wood, *Fermentation, *Pentoses, Yeasts, Polysaccharides, Carbohydrates, Biochemistry, Chemical industry.

Maksimov, L. Kh. and Nuraev, M. G.
ELECCION DE LA POSICION DEL CHORRO DE AGUA PARA MAQUINAS DESCORTEZADORAS HIDRAULICAS (Vybor Vodostruinoi Nasadki dlya Gidravlicheskikh Koroobdirok) (Selection of Water Jet Location in Hydraulic Bark Stripping Machines) 7p. CID: 62-102.
Order from OTS, ETC or CID $0.90 62-26751

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1957 [v. 32] no. 6, p. 19-20.

DESCRIPTORS: *Wood, *Machines, Water impingement, Hydraulic systems.

Nemanikhin, V. N. and Komarovskii, L. E.
FUNCIONAMIENTO DE LA MESA TAMIZADORA EN LA FABRICACION DE PAPEL FINO (Rabota Setochnogo Stola pri Proizvodstve Tonkoi Bumagi) (Operation on Riffle-Tables in the Manufacture of Fine Paper) 5p. 3 refs. CID: 62-109.
Order from OTS, ETC or CID $0.80 62-26758

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1961 [v. 36] no. 5, p. 7-8.
Another trans. is available in English from OTS or SLA $1.10 as 62-16501, Feb 62, 2p.

DESCRIPTORS: *Paper, Industrial production, Wire, Wood pulp.

Noll, August and Hölder, Fritz.
CONCERNING THE DETERMINATION OF LIGNIN IN PAPER PULP, REPT. 1. [1963] [19]p. (figs. omitted) 3 refs.
Order from SLA $1.60 63-14104

Trans. of Papier-Fabrikant (Germany) 1931 [v. 29] no. 30, p. 485-490.

DESCRIPTORS: *Lignin, Paper, Wood pulp, Chemical analysis, Hardness, Hydrolysis.

A rapid method is described for the determination of lignin in pulps which can be carried out with the simplest accessories. The method relies on the use of the so-called powdered material, a dust-fine material produced by a specially constructed grinder. Saccharification of the carbohydrate material is brought about by a new method with 78% sulfuric acid in the presence of tertiary amines or bases, whereby the velocity of the reaction can be extraordinarily accelerated without fear of charring the pulp by the increase in temperature incurred. A sharp indication of the course of the saccharification and the establishment of the end-point is then described. (Author)

Noll, August and Hölder, Fritz.
STANDARD METHOD FOR THE DETERMINATION OF THE LIGNIN-CONTENT OF BLEACHED AND UNBLEACHED PULPS, REPT. 3. [1963] 8p. (figs omitted) 13 refs.
Order from SLA $1.10 63-14109

Trans. of Papier-Fabrikant (Germany) 1934 [v. 32] no. 15, p. 169-170.

DESCRIPTORS: *Lignin, *Wood pulp, Chemical analysis, Bleaching, Resins, Paper industry.

Two parallel research series were drawn up, in which one is designed for the quantitative determination of the lignin content while the second serves as a test of the completeness of the saccharification. (Author) (See also 63-14108)

Noll, A[ugust], Bolz, F., and Fiedler, H.
'MPROVEMENT OF THE METHODS FOR LIGNIN DETERMINATION IN PULPS, REPT. 2. [1963] 14p.
Order from SLA $1.60 63-14108

Trans. of Papier-Fabrikant (Germany) 1932 [v. 30] no. 43, p. 613-616.

DESCRIPTORS: *Lignin, *Wood pulp, Chemical analysis, Paper industry.

It is shown by experimental examples that the resin, which is precipitated at the same time, increases the lignin determination. Several ways are shown of obtaining a resin-free lignin which provides an improvement in the general method. A new routine of operation is given which makes it possible to analyze bleached pulps with exceptionally low lignin contents. (Author) (See also 63-14104)

Pristupa, A. M. and Alekhin, V. E.
ELABORACION DE PAPEL DE PERIODICOS CON UN CONTENIDO BAJO DE CELULOSA (Vyrabotka Gazetnoi Bumagi s Ponizhennym Soderzhaniem Tsellylozy) (Newspaper Manufacture with Low Cellulose Content Paper). 14p. CID: 62-200.
Order from OTS, ETC or CID $1.15 62-26849

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1956 [v. 31] no. 10, p. 15-18.

DESCRIPTORS: *Paper, Processing, Cellulose, Periodicals.

Prober, P. V.
DETERMINACION DE PARAFINA EN PAPEL (Opredelenie Parafina v Bumage) (Wax Determination in Paper) 8p. 4 refs. CID: 62-126.
Order from OTS, ETC or CID $0.90 62-26775

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1959 [v. 34] no. 3, p. 21.

DESCRIPTORS: *Waxes, *Paper, Determination.

Siimes, F. E.
THE EFFECT OF LOG SIZE, SHAPE AND QUALITY, AND THE SAWING SCHEDULE ON THE SAWING RESULT (Tukkien Koon Muodon ja Laadun Seka Sahausasetteen Vaikutus Sahaustulokseen). May 62, 5p. FPRB Trans. no. 152.
Order from NRCC NRCC C-3975

Trans. of Paperi ja Puu (Finland) 1962 [v. 44] no. 1, p. 3-16.

DESCRIPTORS: Forestry, *Trees, *Wood, Processing, Geometric forms, *Sawmills, Operation, Economics.

Simionesku, K., Poppel, E. and Asandei, N.
ESTUDIO DE ALGUNOS FACTORES QUE INFLUYEN EN LA DURACION DEL PAPEL (Izuchenie Nekotorykh Faktorov, Vliyayushchikh na Dolgovechnost'Bumagi) (Study of Several Factors Influencing Paper Life). 23p. 10 refs. CID: 62-167.
Order from OTS, ETC or CID $1.55 62-26816

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1955 [v. 30] no. 11, p. 5-10.

DESCRIPTORS: *Paper, Industrial research.

Solomko, V. S.
PERFECCIONAMIENTO DEL PROCESO DE SECADO DE LA CELULOSA Y DEL PAPEL (Usovershenstvovanie Protsessa Sushki Tsellyulozy i Bumagi) (Improvement of Cellulose and Paper Drying Process). 16p. CID: 62-165.
Order from OTS, ETC or CID $1.25 62-26814

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1955 [v. 30] no. 9, p. 18-21.

DESCRIPTORS: *Cellulose, *Paper, *Dehydration, Processing.

Strunnikov, N. A.
CONTROL DE LA CALIDAD DE LA CAL EN EL PROCESO DE FABRICACION DE LA CELULOSA (Proizvodstvennyi Kontrol'Kachestva Izvesti) (Lime Quality Control in the Cellulose Manufacturing Process). 9p. 3 refs. CID: 62-171.
Order from OTS, ETC or CID $0.95 62-26820

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1958 [v. 33] no. 3, p. 12-14.

DESCRIPTORS: *Cellulose, Industrial production, *Calcium compounds, Oxides, Quality control.

Szoke, B.
SOME PRACTICAL INVESTIGATIONS AND EXPERIENCES IN LUMBER DRYING (Einige Betriebsversuche und -Erfahrungen bei der Schnittholztrocknung). June 61, 4p. FPRB Trans. no. 143.
Order from NRCC NRCC C-3814

Trans. of Holzforschung und Holzverwertung (Austria) 1960, v. 12, no. 6, p. 115-119.

DESCRIPTORS: *Wood, *Dehydration, Moisture, Measurement, Stresses.

Tumbin, P. A.
BLANQUEO CONTINUO DE PASTA DE MADERA FLUIDA CON PEROXIDO DE HIDROGENO (Nepreryvnaya Otbelka Zhidkoi Drevesnoi Massy Perekis'yu Vodoroda) (Continuous Bleaching of Fluid Wood Pulp with Hydrogen Peroxide). 12p. CID: 62-177.
Order from OTS, ETC or CID $1.10 62-26826

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1956 [v. 31] no. 8, p. 16-17.

DESCRIPTORS: *Wood pulp, *Hydrogen compounds, Peroxides, *Bleaching agents.

Tumbin, P. A.
UTILIZACION DE RESIDUOS DE ACIDO SULFURICO (Ispol'zovanie Otbrosnoi Sernoi Kisloty) (Utilisation of Sulfuric Acid Wastes). 11p. CID: 62-176.
Order from OTS, ETC or CID $1.05 62-26825

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1955 [v. 30] no. 8, p. 18-20.

DESCRIPTORS: *Sulfuric acid, *Chemical waste.

Zaitseva, A. F. and Fedorishcheva, I. P.
BLANQUEO DE LA PASTA DE PAPEL AL SULFATO OBTENIDA A PARTIR DE MADERA DE ALERCE (Otbelka Sul'fatnoi Tsellyulozy iz Drevesiny Daurskoi Listvennitsy) (Bleaching of Larch Sulfate Wood Pulp) 13p. 9 refs. CID: 62-147.
Order from OTS, ETC or CID $1.10 62-26796

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1955 [v. 30] no. 8, p. 9-11.

DESCRIPTORS: Paper, *Sulfate pulp, Wood pulp, Bleaching agents.

MATHEMATICS

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 175 (PHYSICS AND MATHEMATICS SERIES). 16 May 63, 9p. JPRS: 19213.
Order from OTS $0.50 63-21824

Consists of abstracts of articles from selected scientific and technical journals of East Germany.

DESCRIPTORS: *Abstracts, *Physics, *Mathematics, East Germany, Electron microscopes, Semiconductors, Gamma emission, Radioactive decay, Field emission, Optical analysis, Magnesium compounds, Integral equations, Photochemistry.

Barbashin, E. A.
ON THE THEORY OF GENERALIZED DYNAMICAL SYSTEMS. July 62 [38]p. 10 refs
Order from OTS or SLA $3.60 63-10167

Trans. of M[oscow] U. Uchen[ye] Zapiski (USSR) [1950] v. 135, p. 110-133.

DESCRIPTORS: *Topology, Transformations (Mathematics), Integral equations, Trajectories, Applied mathematics, Theory, *Control systems.

Considered are questions concerned with the evaluation of dynamical systems which are subject to choice of the system at each time. Problems such as these arise when we consider control of dynamical systems or dynamical systems subject to unknown disturbances. General results are achieved in this paper concerning the axiomic treatment of such systems. (Author)

Lunts, G. L.
APPLICATION OF TAYLOR-DIRICHLET SERIES FOR ESTIMATING THE GROWTH OF ENTIRE FUNCTIONS (Primenenie Ryadov Taylor-Dirichlet k Otsenke Rosta Tselykh Funktsii) tr. by A. Pingell. 1963, 6p. 2 refs. N R L Trans. no. 934.
Order from OTS $0.50 63-11614

Trans. of Akademiya Nauk Armyanskoi SSR [Erevan]. Izvestiya. Seriya Fiziko-Matematicheskikh Nauk, 1961, v. 14, no. 5, p. 3-8.

DESCRIPTORS: Taylor's series, *Series, *Functions, Sequences, Mathematics.

Pogorzelski, Witold.
SCIENTIFIC ACTIVITIES OF THE INTEGRAL EQUATIONS SECTION OF THE MATHEMATICS INSTITUTE, POLISH ACADEMY OF SCIENCES. Resumé of a Lecture delivered at the Henri Poincaré Institute, 19 Apr 61. 13 Mar 63 [12]p. 21 refs. JPRS: 18087.
Order from OTS $0.50 63-21305

Trans. of [Polska Akademia Nauk. Centre Polonais de Recherches Scientifiques, Paris. Bulletin] (France) 1961, no. 19, p. 3-12.

DESCRIPTORS: Scientific organizations, Scientific research, *Mathematics, *Integral equations, *Partial differential equations, Integrals, *Functions, Functional analysis, Poland.

The most important results of the scientific activity of the section on integral equations of the Polish Academy of Sciences are summarized. These include: (1) the properties of solutions and the limit problems for equations with partial elliptical and parabolic derivatives; (2) the properties of curvilinear singular integrals and the discontinuous--limit problems in the theory of analytical functions; (3) the properties of singular integrals in space.

Richter, Klaus-Jergen.
CYBERNETIC ASPECTS OF STATISTICS. 5 Apr 63 [15]p. JPRS: 18579.
Order from OTS $0.50 63-21522

Trans. of Statistische Praxis (East Germany) 1963 [v. 18] no. 1, p. 15-19.

DESCRIPTORS: *Cybernetics, *Applied mathematics, Feedback, Control systems, Artificial intelligence, Functions, Statistical distributions

Questions on the role of statistics as a form of feedback and in the analogy between cybernetics and statistical categories and the type of these analogies are considered.

Zuhovotskii, S. I. and Stechkin, S. N.
APPROXIMATION OF ABSTRACT FUNCTIONS WITH VALUES IN THE HILBERT SPACE. [1963] [8]p. 10 refs.
Order from OTS or SLA $1.10 63-14480

Trans. of Akademiya Nauk SSSR. Doklady, 1956, v. 106, no. 3, p. 385-388.

DESCRIPTORS: *Functional analysis, *Polynomials, Complex numbers, Real variables, Operators (Mathematics), Topology.

Computing Devices

Drugov, K.
MACHINE BIBLIOGRAPHER. [1963] [4]p.
Order from OTS or SLA $1.10 63-14698

Trans. of Nauka i Zhizn' (USSR) 1958 [v. 25] no. 5, p. 68.

DESCRIPTORS: Computers, *Data processing systems, *Data storage systems, *Information retrieval.

Glushkov, V. M.
SELFORGANIZING SYSTEMS AND AN ABSTRACT THEORY OF AUTOMATA. 19 Dec 62, 9p. 2 refs.
Order from OTS or SLA $1.10 63-10623

Trans. of Zhurnal Vychislitel'noi Matematiki i Matematicheskoi Fiziki (USSR) 1962, v. 2, no. 3, p. 459-466.
Another trans. is available from OTS $0.50 as 62-11716 JPRS-14624, 27 July 62, 16p.

DESCRIPTORS: *Data processing systems, *Digital computers, Computers, Theory, Operation, Training, Computer logic, Sequences, Artificial intelligence.

For abstract see Technical Translations 8: 577, 1962

Khrapchenko, V. M.
A METHOD FOR CONVERTING A MULTIDIGIT TO A ONE DIGIT CODE. Foreign Developments in Machine Translation and Information Processing no. 117. 1 Apr 63 [11]p. JPRS: 18458.
Order from OTS $0.50 63-21461

Trans. of Akademiya Nauk SSSR. Doklady, 1963, v. 148, no. 2 [p. 296-303].

DESCRIPTORS: Digital computers, Computers, *Arithmetic operations, *Coding, Numbers, Machine translation.

MECHANICS

Bezhanov, K. A.
INTERACTION OF A SHOCK WAVE WITH THE FREE SURFACE OF A FLUID [Vzaimodeistviye Udarnoi Volny so Svobodnoi Poverkhnost'yu Zhidkosti]. [1963] 2p.
Order from OTS or SLA $1.10 63-10900

Summary trans. of Zhurnal Vychislitel'noi Matematiki i Matematicheskoi Fiziki (USSR) 1961, v. 1, no. 1, p. 129-143.
A complete trans. is available from OTS or SLA $3.60 as 63-10823 [1962] 31p.

DESCRIPTORS: *Shock waves, Surface area, Fluids, Fluid flow, Functions, Numerical analysis, Gas flow, *Fluid mechanics.

Bolotin, V. V.
STATISTICAL METHODS IN THE NON-LINEAR THEORY OF ELASTIC SHELLS. [Statisticheskie Metody v Nelinenoi Teorii Uprigikh Obolochek] [1963] 20p. 8 refs.
Order from OTS or SLA $2.60 63-14662

Trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya, 1958, no. 3, p. 33-41. Other translations are available from OTS or SLA $1.60 as 62-16026 [1962] [20]p. and from OTS $0.50 as 63-11525, NASA TT-F-85, Dec 62, 16p.

DESCRIPTORS: *Elastic shells, Creep, Load distribution, Deformation, Stability, *Probability, Statistical analysis.

For abstract see Technical Translations 9: 413, 1963.

Dahl, W. and Hangstenberg, H.
EVALUATION OF NOTCH IMPACT BENDING TESTS WITH THE AID OF A. H. COTTRELL'S BRITTLE FRACTURE THEORY. [1963] 7p.
Order from ATS $9.45 ATS-61Q69G

Trans. of Arch[iv für das] Eisenhüttenw[esen] (West Germany) 1962, v. 33, no. 11, p. 771-774.

DESCRIPTORS: Impact shock, *Stresses, Tests, *Brittleness, *Fracture (Mechanics), Theory, Analysis.

Ivashchenko, N. I. and Kutateladze, S. S.
THE EFFECT OF THE TEMPERATURE FACTOR ON HEAT TRANSFER IN THE TURBULENT FLOW OF A GAS IN PIPES [AND] SOME PROBLEMS OF HEAT EXCHANGE AND FRICTIONAL RESISTANCE IN TURBULENT FLOWS, tr. by J. J. Cornish. 1962 [27]p. 5 refs. AERE - Trans 911, pts. 1-2.
Order from OTS or SLA $2.60 63-15922

Trans. of Teploenergetika (USSR) 1956 [v. 3] no. 7, p. 40-45 and 1958 [v. 5] no. 2, p. 72-75.

DESCRIPTORS: *Gas flow, Turbulence, *Heat transfer, Pipes, Temperature, Friction, Velocity, Boundary layer, Equations of motion, Fluid dynamics

The results are given of an experimental study of the velocity fields and the local heat transfer coefficients with turbulent air flow in a pipe. (Ivashchenko) This article gives a classification of heat-transfer agents according to their ν/a ratio; equations are derived for the averaged turbulent flow of a compressible fluid; an evaluation is made of the influence exerted by density fluctuations on the intensity of turbulent transfer in a plane gas flow; it is demonstrated that the velocity in the core of a plane turbulent flow of compressible gas is a function of the sine of the logarithm of the distance from the wall; examples examined are gas flow in a pipe and flow round a plate. (Kutateladze)

Konovalov, E. G.
FOUNDATIONS OF NEW METALWORKING TECHNIQUES. CHAP. 3. VIBRATION GRINDING: SELECTED PARTS. 11 Apr 63 [45]p. FTD-TT-63-44.
Order from OTS or SLA $4.60 63-19320

Unedited rough draft trans. of mono. Osnovy Novykh Sposobov Metalloobrabotki, Minsk, 1961, p. 92-100, 150-156, 246-262.

DESCRIPTORS: *Vibration, Grinders, Machining, Metals, Alloys, Dynamics, Test equipment, Thermodynamics, Steel, Surface properties, Friction, Hardness, *Stresses.

Contents:
Physicomechanical foundations of vibration cutting of metals and alloys
Thermal research in vibration grinding of hard alloy
Dynamics of rotation drifting
Investigation of depth of cold-hardened layer
Wear resistance of machined surface
Study of residual stresses.

Ponomarev, S. D., Biderman, V. L. and others.
SOME PROBLEMS OF THE APPLIED THEORY OF ELASTICITY; CALCULATIONS BEYOND ELASTICITY LIMITS; CREEP CALCULATIONS (Nekotorye Zadachi Prikladnoy Teorii Uprugosti; Raschety za Predelami Uprugosti; Raschety na Polzuchest'), Oct 60 [192]p. 91 refs. MCL-637/V; AD-257 152.
Order from OTS or SLA $13.50 61-23177

Trans. of mono. Raschety na Prochnost' v Mashinostroenii (Strength Calculations in Machine Construction) [v. 2] Moscow, 1958, p. 487-494, 592-652, 754-812.

DESCRIPTORS: *Machines, Design, Materials, Rubber, Mechanical properties, Stresses, *Elasticity, *Plasticity, Deformation, Metals, Alloys, Theory, Crystal structure, Mathematical analysis, *Creep, Pressure, *Mechanical engineering, Determination.

Contents:
Calculations of Rubber and Rubber-Cord Parts
Theory of Small Elasto-Plastic Deformations
Calculations of Parts Made of Materials with Unequal Resistance to Tension and Compression

Aerodynamics and Pneumatics

Mugalev, V. P.
EXPERIMENTAL STUDY OF A SONIC TURBULENT BOUNDARY LAYER ON A PLATE WITH A BLAST. [1963] 13p. 3 refs.
Order from OTS or SLA $1.60 63-14658

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Aviatsionnaya Tekhnika (USSR) 1959, no. 3, p. 72-79. Another trans. is available from OTS or SLA $1.60 as 61-27780, Rand T-142, 8 Dec 60 [19]p.

DESCRIPTORS: *Turbulent boundary layer, Velocity, Jets, Wind tunnel models

For abstract see Technical Translations 6: 690, 1961

Pirumov, U. G. and Rubtsov, V. A.
CALCULATION OF AXIALLY SYMMETRIC ANNULAR SUPERSONIC NOZZLES (Raschet Osesimmetrichnykh Sverkhzvukovykh Kol'tsevykh Sopel). [1962] [36]p. (foreign text included) 3 refs.
Order from OTS or SLA $3.60 63-10829

Trans. of Akademiya Nauk SSSR. Otdel[enie] Tekh[nicheskikh] Nauk. Izvestiya: Mekhanika i Mashinostroenie, 1961, no. 6, p. 15-25.
Another trans. is available from OTS or SLA $3.60 in 62-33530, FTD-TT-62-494, 10 Sep 62 [40]p.

DESCRIPTORS: *Hypersonic flow, *Boundary layer, Blunt bodies, Chemical reactions, Heat transfer, Diffusion, Numerical analysis, Supersonic flow, *Supersonic nozzles, Superaerodynamics, Axially symmetric flow.

For abstract see Technical Translations 9: 414, 1963.

Pirumov, V. G. and Rubtsov, V. A.
DESIGN OF AXIALLY SYMMETRIC SUPERSONIC ANNULAR NOZZLES [Passbot Osesimmetrichnykh Sverkhzvukovykh Kol'tsevykh Sopel]. [1963] 2p. (figs omitted).
Order from OTS or SLA $1.10 63-10901

Summary trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Mekhanika i Mashinostroenie, 1961, no. 6, p. 15-25.
Complete translations are available from OTS or SLA $3.60 as 63-10829 [1962] [36]p. and in 62-33530, FTD-TT-62-494, 10 Sep 62 [40]p. (unedited).

DESCRIPTORS: *Supersonic nozzles, *Annular nozzles, Axially symmetric flow, Design.

This paper suggests a method for computing axially symmetric supersonic annular nozzles having two angular points and a rectilinear sonic line. Analysis is applied to nozzles with angular points located in one plane as well as to nozzles with the displaced angular points. Flow in such nozzles is investigated and some results are given. (Author)

METALLURGY

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 59 (METALLURGY SERIES). 20 May 63, 25p. JPRS: 19270.
Order from OTS $0.75 63-21853

Trans. of selected abstracts from Referativnyi Zhurnal. Metallurgiya (USSR) 1962, nos. 9-12.

DESCRIPTORS: *Metallurgy, *Abstracts, *China, Rare earth elements, Semiconductors, Welding, Metallography, Heat resistant alloys, Industrial production.

FLOTATION OF IRON ORES AT THE TA-KU SHAN PLANT. 9 Apr 63 [8]p. JPRS: 18631.
Order from OTS $0.50 63-21549

Trans. of mono. Flotatsiya Zheleznykh Rud (Flotation of Iron Ores) Moscow, 1962, p. 183-187.

DESCRIPTORS: *Ores (Metal sources), *Iron, *Flotation (Separation), Industrial plants, Mining engineering.

SOVIET RESEARCH IN HARD ALLOYS. 10 Apr 63 [44]p. 21 refs. JPRS: 18637.
Order from OTS $1.25 63-21554

Trans. of mono. Spravochnik po Mashinostroitel'nym i Ikh Splavy (Machinebuilding Materials Manual) v. 2, Moscow, 1959, chap. 10, p. 533-551, 559-561, 565-570.

DESCRIPTORS: *Powder alloys, *Powder metallurgy, *Carbides, *Tungsten alloys, *Titanium alloys, *Tantalum alloys, Cobalt alloys, Microstructure, Mechanical properties, Corrosion, Aluminum compounds, Oxides, *Carbide tools, Electrodeposition, Electrodes.

Akimov, N. A.
EMPLEO DE HORMIGON REFRACTARIO PARA EL REVESTIMIENTO DE HORNOS PARA LA TOSTACION DE PIRITAS (Primenenie Zharouopornogo Betona diya Obmurovki Kolchedannyikh Pechei) (Heat Resistant Concrete in Pyrites Roasting Furnaces). 7p. CID: 62-175.
Order from OTS, ETC or CID $0.90 62-26824

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1960 [v. 35] no. 7, p. 21-22.

DESCRIPTORS: *Fire resistant coatings, *Concrete, *Combustion chambers, *Pyrites.

Alov, A. A. and Shmakov, V. M.
ARGON-ARC WELDING WITH ADDITIONAL ARGON STREAM. 4 Mar 63 [10]p. 2 refs. FTD-TT-62-1754.
Order from OTS or SLA $1.10 63-19308

Unedited rough draft trans. of #Svarochnoe Proizvodstvo (USSR) 1962, no. 3, p. 13-16.

DESCRIPTORS: *Argon, *Arc welding, *Aluminum.

A description is given of argon-arc welding with the employment of an additional stream of argon to increase the depth of melting of the basic metal. The dependence of seam dimensions upon the consumption of argon in the additional stream was determined. It was shown that at optimum consumption of additional argon stream the depth of melting increased by two times in comparison with welding without additional stream. (Author)

Bal'shin, M. Yu. and Trofimova, A. A.
ISOTHERMAL SINTERING OF METALLIC POWDERS UNDER PRESSURE. 20 Mar 63 [17]p. 5 refs. JPRS: 18245.
Order from OTS $0.50 63-21371

Trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Metallurgiya i Toplivo, 1961, no. 6, p. 45-51.
Another trans. is available from OTS or SLA $1.60 as 62-25307, DSIR NLL M.3638, Feb 62 [11]p.

DESCRIPTORS: *Powder metals, *Sintering, Plasticity, Deformation, Creep, High pressure research, Temperature, Dies, Iron, Copper, Nickel alloys, Load distribution, *Powder metallurgy

For abstract see Technical Translation 9: 80, 1963.

Baranov, I. B.
COLD WELDING OF PLASTIC METALS. 7 May 63, 175p. 58 refs. JPRS: 19103.
Order from OTS $3.00 63-21785

Trans. of mono. Kholodnaya Svarka Plastichnykh Metallov, Moscow, 1962, 150p.

DESCRIPTORS: Metals, Plasticity, Deformation, *Welding, Cold-working, *Aluminum, *Copper, *Bonding, *Welds, Electrical industry, Electrical equipment.

Benua, F. F., Vologdin, I. V., and Katler, A. I.
STUDY OF THE EFFECT OF VIBRATION ON THE CRYSTALLIZATION PROCESS AND ON THE STRUCTURE OF WELDED METAL IN FLUX-BATH WELDING. [1963] [14]p. 12 refs.
Order from OTS or SLA $1.60 63-14487

Trans. of Svarochnoe Proizvodstvo (USSR) 1959, no. 5, p. 1-5.
Another trans. is avialable from HB $5.50 as HB-4487, Mar 59.

DESCRIPTORS: *Arc welds, *Weld, *Welding fluxes, *Vibration, *Crystallization, Structural properties, Microscopy, *Metallography.

Brandi, Hermann Theodor, Ischebeck, Paul, and Heynert, Gerhard.
BLAST FURNACE LINES AND DESIGN OF CHARGING EQUIPMENT. [1962] [17]p. 17 refs.
Order from SLA $1.60 62-14666

Trans. of Stahl und Eisen (West Germany) 1960, v. 80, no. 2, p. 65-73.

DESCRIPTORS: *Blast furnaces, Design, Industrial research.

Topics: Historical Development; calculation of inner lines; design of outer lines; and, design of charging equipment.

Bron, V. A. and Lande, P. A.
ALUMINA-CHROME REFRACTORIES FOR LINING STEELWORKS LADLES tr. by R. Sewell. 29 Oct 57 [6]p. [BISI] Trans. 731; [Trans.] no. 4601; [DSIR] NLL M.4174.
Order from OTS or SLA $1.10 62-13196

Trans. of #Metallurg (USSR) 1957 [v. 2, no. 9] p. 17-18.
Another trans. is available from ASLIB as ASLIB-GB-70

DESCRIPTORS: *Refractory materials, *Aluminum compounds, *Chromium compounds, *Brick, Steel industry, Industrial equipment, Oxides.

Alumina-chrome bricks used in steelworks ladles exhibited a high resistance to wear, greatly exceeding that of fireclay brick. Ladle lining life is at least doubled. (Author)

Dekhtyar, I. Ya. and Shalaev, A. M.
EFFECT OF GAMMA-RADIATION ON CERTAIN MAGNETIC PROPERTIES OF IRON AND ITS ALLOYS (V pliv Gamma-Oprominyuvannya na Deyaki Magniti Vlastivosti Zaliza i Iogo Splaviv). 11p. (foreign text included). 9 refs. DTC-2.
Order from OTS, ETC or DTC $1.05 62-28789

Trans. of Ukrayins'kyi Fizychnyi Zhurnal (USSR) 1960, v. 5, no. 5, p. 677-680.

DESCRIPTORS: *Iron, Iron alloys, Nickel alloys, *Magnetic properties, *Gamma rays.

Golubtsova, P. B. and Mashkovich, L. A.
CHEMICAL ISOLATION AND ANALYSIS OF METALLIC COMPOUNDS FORMED IN CERTAIN ALLOYS WITH NICKEL BASE. [1963] [11]p.
Order from OTS or SLA $1.60 63-14665

Trans. of Akademiya Nauk SSSR. Doklady, 1956, v. 106, no. 6, p. 1011-1014.

DESCRIPTORS: *Metallic compounds, Alloys, Nickel, Titanium, *Phase studies, *Electrolytes, Electrodeposition, Chemical analysis, Metallurgy

Gorbunova, K. M. and Nikiforova, A. A.
PHYSICOCHEMICAL PRINCIPLES OF NICKEL PLATING, tr. by Abraham J. Aladjem. 1963, 155p. 90 refs. PL-480 Comm.
Order from OTS $1.50 63-11003

Trans. of mono. Fiziko-Khimicheskie Osnovy Protsessa Khimicheskogo Nikelirovaniya, Moscow, 1960 [207p.].

DESCRIPTORS: Metal coatings, Production, *Nickel plating, Metals, Salts, Reduction (Chemistry), *Phosphites, Acids, Buffers, Complex compounds, Hydroxides, Deposits, Physical properties, Chemical properties, Magnetic properties, Hardness, Adhesion, Brittleness, Mechanical properties, Corrosion inhibition, Microstructure, Chemical analysis, *Cobalt, Cobalt alloys, Nickel alloys

Contents:
A short history of the research on the reducing action of hypophosphite on the salts of heavy metals
The conditions under which nickel coatings are formed in an acid medium
Methods for improving the process
The course of the process in alkaline solutions
Properties of the coatings
The structure of the deposits
The mechanism of the process of reduction of nickel by hypophosphite
Some data on the industrial applications of chemical nickel plating
Methods for the quantitative determination of hypophosphite and phosphite in the solutions
Some data on the deposition of nickel on non-metallic surfaces
The conditions under which cobalt and nickel-cobalt coatings are formed

Gusev, A. N.
PERFECCIONAMIENTO EN BAÑOS DE CAMPANA PARA COBREADO, NIQUELADO Y GALVANIZADO POR ELECTROLISIS (Usovershenstvovannaya Kolokol'naya Vanna) (Developments in Electrolytic Baths for Copper and Nickel Deposition and Galvanisation). 8p. CID: 62-140.
Order from OTS, ETC or CID $0.85 62-26789

Trans. in Spanish of [Avtomobil'naya Promyshlennost'] (USSR) 1955, no. 1, p. 30-31.

DESCRIPTORS: *Nickel plating, *Zinc plating, *Copper plating, Electrolytes.

Kerekes, Istvanne.
SPECTRAL ANALYSIS OF HIGH PURITY METALS. 29 Apr 63, 5p. JPRS: 18953.
Order from OTS $0.50 63-21704

Trans. of Kohaszati Lapok (Hungary) 1963, v. 96, no. 2, p. 88-89.

DESCRIPTORS: *Spectrographic analysis, Metals, Impurities.

The article deals with determination of trace elements contained in certain high-purity metals produced or consumed in Hungary. Determination may be accomplished with, or without separation of the spectrum of the basic metal and the very small amounts of other elements. Separation may be performed with separation of performance of the evaporation and ignition processes, suppression of the spectrum of the basic metal, chemical removal of the basic metal, or with color analysis by timing. The capacity, precision and utilization possibilities of the individual methods are discussed. (Author)

Koch, Walther and Gautsch, Othmar.
SIMPLER CHLORINE VACUUM SEPARATION TECHNIQUE. [1962] [18]p. 23 refs.
Order from SLA $1.60 62-14660

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1959, v. 30, no. 12, p. 723-730 (Max Planck Institut für Eisenforschung (West Germany). [Communication]-834; Verein Deutscher Eisenhüttenleute (West Germany). [Berichte]-284).

DESCRIPTORS: *Steel, *Chlorination, *Chlorine, Separation, Vacuum systems, *Iron compounds, Chromium compounds, Vanadium compounds, Titanium compounds, Molybdenum compounds, Carbides, Sulfides, *Aluminum compounds, Nitrides, Oxides.

In order to simplify the chlorine vacuum technique the halogen is placed into a vertical brance tube or in the front section of a glass tube and the phase mixture to be separated into the rear section of the tube. The tube is subsequently evacuated under deep cooling of the halogen and sealed by fusing. The halogen can be heated or cooled to a certain temperature T_2 to give a vapour pressure, at which the halogen can act upon the phase mixture kept at a certain temperature T_1 in the rear section of the tube. The reactions between the halogens and the electrolytic residue are thus taking place at a controlled temperature and pressure in a space sealed against the outside. Compared with the former technique the new method does not only allow an examination of residues resistant to chlorine but also of sublimation products. In order to widen the range of possible separation, other halogens such as bromine, iodine and iodine tric chloride as well as mixtures of chlorine with carbon tetrach-tetrachloride and chloroform were tested. A comparison of the results obtained on a mild steel between the new and the old technique gave a good agreement, though the new method gave slightly higher residual quantities than the older one. (Author)

Kostenets, V. I. and Ivanchenko, A. M.
MECHANICAL PROPERTIES OF METALS AND MELTS WITH STATIC LOAD AT LOW TEMPERATURES (-196° and -253° C). IV. SOLDER. [1963] [8]p.
Order from OTS or SLA $1.10 63-14490

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1946, v. 16, no. 5, p. 551-554.

DESCRIPTORS: *Metals, *Soldering alloys, *Silver solders, *Lead alloys, Statics, *Low temperature research, *Mechanical properties, Measurement.

This communication contains the results of measurements at +17, -196° and -253° C of the temporary tensile strength σ_B, residual expansion-- δ, and lateral contraction-- ψ of nine types of soft solders with a lead content of 10% to 75% and a tin content of 90% to 25%, and of two types of hard silver solders. (Author)

Kostenets, V. I., Lazarev, B. F. and others
RESILIENCE OF METALS AT -253° C. [1963] [12]p. (refs. omitted).
Order from OTS or SLA $1.60 63-14488

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1948, v. 18, no. 9, p. 1149-1155.

DESCRIPTORS: *Metals, *Elasticity, Mechanical properties, *Low temperature research, Copper, Brass.

A rapid measuring method of the resilience of samples at temperatures of liquid nitrogen and liquid hydrogen (-196° and -253° C) is presented. Resilience measurements were made at -196° and -253° C on three types of metals: Copper M-3, brass LS-62 and brass LS-59. (Author)

Langhans, W.-U.
HEAT TRANSFER AND PRESSURE DROP IN REGENERATORS WITH BASKET WAVE STORAGE MEDIA. Jan 63.
Order from BISI £5 15s BISI-2968-II

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1962, v. 33 [no. 7] p. 441-451.

DESCRIPTORS: *Heat exchangers, Heat transfer, *Pressure, Measurement, Test methods, Brick, Combustion chambers.

May, O.
COLD PRESSING OF SYMMETRICAL AND ASYMMETRICAL PARTS. May 63.
Order from BISI £3 10s BISI-3132

Trans. of Werkstattstechnik [und Maschinenbau] (Germany) 1959, v. 49 [no. 1] p. 22-26.

DESCRIPTORS: *Cold-working, Processing, *Tensile properties, *Deformation, Metal forming presses, Pressure.

Mecacci, G. and Violi, G.
USE OF OXYGEN FOR INCREASING THE PRODUCTIVITY OF THE OPEN HEARTH FURNACES. Dec 62, 26p.
Order from SLA $2.60 63-10864

Trans. of Radex-Rundschau (Austria) 1962, no. 5, p. 250-270.
Another trans. is available from BISI £5 10s as BISI-3069, Mar 63.

DESCRIPTORS: *Open hearth furnaces, *Oxygen, *Steel, Liquids, Iron, Fuel consumption, Economics, Production.
Oxygen as a means for raising the flame temperature and for increasing the speed of decarburization is nowadays widely used in the open-hearth process. A large number of tests was run with three 210 t fixed open hearth furnaces heated with coke-oven gas and fuel oil; in the main roofs of these furnaces two water-cooled lances for introducing O_2 were arranged. An increase of the net hourly output by 25% was reached by the use of oxygen, and at the same time the heat consumption was reduced by 23%. Reduced fuel consumption and shortened melting time are in direct connection with the reduced specific heat requirements. By the use of O_2 the output only changed insignificantly, namely from 88.1 to 86.5%. There seems to be a certain connection between charging time and oxygen consumption. An increase of the liquid charge caused raising of the oxygen consumption with a simultaneous reduction of the fuel consumption but without a particular increase of the output. Finally certain existing limits in the use of O_2 in an open hearth furnace are pointed out. (Author)

Medovar, B. I. and Gurevich, S. M.
OXYGEN-FREE FLUXES FOR WELDING HIGH-ALLOY STEELS AND ALLOYS. Nov 59 [13]p. 16 refs. BISI Trans. 1335; [DSIR] NLL M. 4867.
Order from OTS or SLA $1.60 62-25330

Trans. of Avtomaticheskaya Svarka (USSR) 1955, v. 8, no. 4, p. 31-41.
Another trans. is available from OTS or SLA $1.60 as 62-14395 [1962] [12]p.

DESCRIPTORS: *Steel, Welding, *Welding fluxes, *Antioxidants, Austenite, Chemical analysis, Welds, Mechanical properties, Hydrogen.

In this work the peculiarities of fluxes are reviewed, which do not include oxygen in their composition and which form neutral slags when welding. Oxygen-free fluxes do not enter into metallurgical reactions with the molten metal, oxidise the welding pool or prevent its assimilation of all the alloying elements (including those which have a great affinity to oxygen) contained in the base metal and in the welding wire. Oxygen-free fluxes introduce a fundamental change into the metallurgy of welding austenitic steels, enabling titanium-containing electrode wire to be used and greatly increasing the resistance of the seam to the formation of hot cracks. The possibilities are discussed of using the new fluxes for welding low- and medium-alloy engineering steels. (Author)

Merpert, M. P.
ALGUNOS PROBLEMAS DE AUTOMATIZACION DEL TRABAJO EN PULIDORAS (Nekotorye Voprosy Avtomatizatsii Raboty Shlifoval'nykh Stankov) (Automation Problems in Grinding Machine Operation). 22p. 14 refs. CID: 62-185.
Order from OTS, ETC or CID $1.55 62-26834

Trans. in Spanish of #Stanki i Instrument (USSR) 1960 [v. 31] no. 10, p. 14-17.

DESCRIPTORS: Automation, *Grinders.

Moizhes, B. Ya.
POSIBILIDADES PARA REDUCIR EL PRECIO DE COSTE Y ACORTAR LA DURACION DE LOS TRABAJOS PREPARATORIOS EN LA CONSTRUCCION DE ALTOS HORNOS (Rezervy Snizheniya Stoimosti i Sokrashcheniya Prodolzhitel'nosti Rabot Podgotovitel'nogo Perioda pri Stroitel'stve Domennykh Pechei) (Feasibility of Reducing Costs and of Shortening Preliminary Work in Blast Furnace Erection). 10p. CID: 62-105.
Order from OTS, ETC or CID $1.00 62-26754

Trans. in Spanish of Promyshlennoe Stroitel'stvo (USSR) 1961 [v. 39] no. 2, p. 19-21.

DESCRIPTORS: Costs, Time, *Blast furnaces, Construction.

Muhlrad, W.
REMOVAL OF DUST FROM BASIC-OXYGEN FURNACE BROWN FUMES BY MEANS OF BAG FILTERS. Mar/Apr 63, 5900 words.
Order from HB $12.70 HB-5768

Trans. of Stahl und Eisen (West Germany) 1962, v. 82, no. 22, p. 1579-1584.

DESCRIPTORS: Oxygen, Furnaces, Industrial plants, *Dusts, *Particulate filters, Fume hoods, Design, Waste gases, Cleaning

Myl'nikov, V. P.
RECUBRIMIENTO DE LOS HORNOS DE PIRITA CON HORMIGON RESISTENTE AL CALOR, COMO MEDIO DE INTENSIFICAR SU RENDIMIENTO (Futerovka Kolchedannykh Pechei Zharoupornym Betonom-Sredstvo Intensifikatsii Ikh Raboty) (Coating of Pyrites Furnaces with Heat-Resistant Concrete in Order to Increase their Field) 5p. CID: 62-107.
Order from OTS, ETC or CID $0.80 62-26756

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1955 [v. 30] no. 4, p. 24.

DESCRIPTORS: *Combustion chambers, *Concrete, *Heat resistant coatings, *Pyrites.

Nikolaev, A. N.
VERTICAL SINTERING FURNACE. 27 May 63, 15p. 4 refs. JPRS: 19429.
Order from OTS $0.50 63-21927

Trans. of Poroshkovaya Metallurgiya (USSR) 1962 [v. 2] no. 5, p. 89-98.

DESCRIPTORS: *Furnaces, *Sintering, Design, Powder metallurgy.

Ovchinnikov, B. A.
MECANIZACION DE LA ELIMINACION DE ESCORIAS EN HORNOS PARA PIRITA (Mekhanizatsiya Udaleniya Ogarkov Kolchedannykh Pechei) (Mechanisation of Slag Disposal in Pyrites Furnaces) 9p. CID: 62-110.
Order from OTS, ETC or CID $0.95 62-26759

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1960 [v. 35] no. 4, p. 15-16.

DESCRIPTORS: Combustion chambers, *Pyrites, *Slags, Separation, Automation.

Pal'guev, S. F., Yushina, L. D., and Ovchinnikov, Yu. M.
STUDY OF THE SINTERING OF OXIDES BY THE ELECTRICAL CONDUCTIVITY METHOD. 25 Mar 63 [10]p. 5 refs. JPRS: 18350.
Order from OTS $0.50 63-21420

Trans. of mono. Elektrokhimiya Rasplavlennykh Solevykh i Tversykh Elektrolitov (Electrochemistry of Molten Saltsand Solid Electrolytes) v. 2, Sverdlovsk, 1961, p. 193-197.

DESCRIPTORS: *Sintering, *Oxides, *Electrical conductance, *Powder metallurgy, *Cerium compounds, Strontium compounds, Magnesium compounds, Calcium compounds, Beryllium compounds, Dioxides

Pavlov, I. M.
RESEARCH ON THE ROLLING PROCESS. Mar 60 [35]p. 252 refs. BISI Trans. 1542; [DSIR] NLL M. 4925
Order from OTS or SLA $3.60 62-25873

Trans. of mono. Metallurgiya SSSR 1917-57, ed. by I. P. Bardin, Moscow, 1959, v. 2, p. 56-81.
Another trans. is available from OTS or SLA $3.60 as 62-14672 [1962] [34]p. and a complete trans. of v. 2 is available in 4 pts. from LC or SLA as 60-27024-(1-4) MCL-455, pts. 1-4, and from OTS $10.00 in 60-51188, 1961, 997p.

DESCRIPTORS: *Rolling mills, Industrial research, *Metallurgy, Manufacturing methods, Friction, Power, Energy, Deformation, Velocity, Bibliography.

For Abstract See Technical Translations 3: 603, 1960.

Petrov, Kh. N.
PLATO NEUMATICO-HIDRAULICO DE TORNO CON EXTRACCION AUTOMATICA DE LA PIEZA (Pnevmogidroplastovyi Patron k Tokarnomu Stanku) (Pneumatic-hydraulic Lathe Chuck with Automatic Expulsion of Work-Pieces). 4p. CID: 62-189.
Order from OTS, ETC or CID $0.75 62-26838

Trans. in Spanish of Stanki i Instrument (USSR) 1955 [v. 26] no. 10, p. 32.

DESCRIPTORS: *Lathes, *Pneumatic servomechanisms, Hydraulic actuators.

Pustynskii, A. K.
EXTRACCION DE LAS CENIZAS DE LOS HORNOS DE PIRITAS POR MEDIO DE UN TUBO CON TORNILLO SIN FIN (Udalenie Ogarkov ot Kolchedannykh Pechei pri Pomoshchi Shnekovoi Truby) (Disposal of Pyrite Furnace Ashes by a Worm Gear Equiped Pipe) 8p. CID: 62-197.
Order from OTS, ETC or CID $0.90 62-26846

Trans. in Spanish of Bumazhnaya Promyshlennost' (USSR) 1955 [v. 30] no. 2, p. 23-24.

DESCRIPTORS: *Slags, *Pyrites, Disposal, Combustion chambers, Worm gears, Pipes.

Pyatetskii, B. N.
METODO RACIONAL DE TRABAJO EN TORNO (Ratsional'nyi Metod Obrabotki na Tokarnom Stanke) (Rationalised Lathe Operating Method) 5p. CID: 62-160.
Order from OTS, ETC or CID $0.80 62-26809

Trans. in Spanish of Stanki i Instrument (USSR) 1955 [v. 26] no. 3, p. 33.

DESCRIPTORS: Machining, *Lathes.

Rybakov, A. P.
CUCHILLA DE CORTE-SECCIONAMIENTO DE DOBLE FILO (Dvukhstupenchatyi Otreznoi Rezets) (Double-Edged Cutting Blade) 5p. CID: 62-158.
Order from OTS, ETC or CID $0.80 62-26807

Trans. in Spanish of Stanki i Instrument (USSR) 1955 [v. 26] no. 10, p. 35.

DESCRIPTORS: *Cutting tools.

Sandler, N. I. and Solov'eva, G. G.
THE ORIGIN OF COLOURED SPOT ON TINPLATE. Feb 60 [5]p. 3 refs. BISI Trans. 1570; [DSIR] NLL M. 4927.
Order from OTS or SLA $1.10 62-25874

Trans. of Stal' (USSR) 1958 [v. 18] Metallography and Heat Treatment Suppl. p. 247-250.
Another trans. is available from OTS or SLA $1.10 as 62-14677 [1960] [4]p.

DESCRIPTORS: *Metal plates, Coatings, *Tin, Rolling mills, Thin films, Oxides, Microstructure, Surface area.

For Abstract See Technical Translations 3:604, 1960.

Semenov, E. I.
LA FORJA DE ESTAMPA EN LOS EE. UU. (Svobodnaya Kovka v S. Sh. A.) (The Forge Press in the USA) 20p. CID: 62-168.
Order from OTS, ETC or CID $1.40 62-26817

Trans. in Spanish of #Vestnik Mashinostroeniya (USSR) 1960 [v. 40] no. 6, p. 79-83.

DESCRIPTORS: *Forge presses, North America.

Shepelyanovskii, K. Z. and Shklyarov, I. N.
INSTALACION AUTOMATICA PARA FORJA EN CALIENTE (Avtomaticheskii Nagrevatel'no-Kovochnyi Agregat) (Automatic Heat Forging Plant) 16p. 1 ref. CID: 62-123.
Order from OTS, ETC or CID $1.25 62-26772

Trans. in Spanish of Vestnik Mashinostroeniya (USSR) 1956 [v. 36] no. 1, p. 45-49.

DESCRIPTORS: *Forging, Heat treatment, *Automation, Industrial plants.

Suchkov, L. A. and Burtsev, V. V.
AUTOMATIC CONTROL OF GAS DISTRIBUTION IN A BLAST FURNACE SHAFT, tr. by R. C. Murray. Sep 58 [9]p. 5 refs. [BISI] Trans. 963; [Trans.] no. 4983; [DSIR] NLL M. 4091.
Order from OTS or SLA $1.10 62-13202

Trans. of Stal' (USSR) 1958, v. 18, no. 2, p. 110-113.

DESCRIPTORS: *Blast furnaces, *Gases, Carbon compounds, Dioxides, Temperature, Measurement, Automatic, Control

Yushkin, V. V.
THE EMPLOYMENT OF AN ELECTRIC INTEGRATOR FOR THE STUDY OF THE TEMPERATURE DISTRIBUTION OF THE HEARTH AND FOUNDATION OF A BLAST FURNACE. Apr 60 [21]p. 4 refs.
BISI Trans. 1578; [DSIR] NLL M. 4928.
Order from OTS or SLA $2.60 62-25875

Trans. of Stal' (USSR) 1957 [v. 17, no. 9] p. 779-787. Another trans. is available from OTS or SLA $1.60 as 62-14549 [1962] [20]p.

DESCRIPTORS: *Blast furnaces, *Electronic integrators, Temperature, Distribution, Design.

For Abstract See Technical Translations 8: 477, 1962

Zhukov, A. M.
CONDITIONS OF DESTRUCTION OF PLASTIC METALS IN A COMPLEX STRESS STATE [Ob Usloviyakh Razrusheniya Plastichnykh Metallov pri Slozhnom Napryazhennom Sostoyanii]. [1963] 7p. 12 refs.
Order from OTS or SLA $1.10 63-14660

Trans. of Akad[emiya] Nauk SSSR. Otd[elenie] Tekh[nicheskikh] Nauk. Izv[estiya] 1958, no. 5, p. 110-[115].

DESCRIPTORS: *Failure (Mechanics), *Stresses, Plasticity, *Metals, Deformation, Load distribution, Tests, Mathematical analysis.

Ferrous Metals

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 108. 18 Apr 63, 63p.
JPRS: 18779.
Order from OTS $1.75 63-21610

Trans. of Ekonomika Radyans'koi Ukrainy (USSR) 1963, no. 1, p. 36-39; Byulleten Tekhniko-Ekonomicheskoi Informatsii (USSR) 1963, no. 1, p. 3-11 and 78-79; and from Sovetskaya Rossiya (USSR) 1963, 16 Jan, p. 1; Trud, Moscow (USSR) 1963, 24 Jan; Kazakhstanskaya Pravda (USSR) 1963, 18 Jan; Ekonomicheskaya Gazeta (USSR) 1963 [no. 8(81)] 23 Feb, p. 7.

DESCRIPTORS: *Industrial production, *Metallurgy, Industrial plants, Construction, *Steel, Steel industry, Smelting, *Casting, *Powder metallurgy, Powder alloys, Iron compounds, Carbonyl radicals, Mining engineering, Hoists, *Semiconductor devices, *Transformers, Rolling mills.

Contents:
Inadequate building rate of the oxygen converter shops at Nizhnii Tagil
Achievements at Kuznetsk metallurgical combine and tasks set for the fifth year of the Seven-Year Plan, by B. Zherebin and others
Management at the new construction project of the Magnitogorsk metallurgical plant
Lagging behind in the introduction of the oxygen-converter method and in the production of the necessary equipment, by V. Peredereev
Quality of production and profitability of metallurgical enterprises, by K. Vorobyova
Production and prospects for the application of partially deoxidized steels, by L. M. Efimov and others
Powdered class R-100 carbonyl iron for the radio industry, by V. G. Syrkin
Type UKP-UEChM semiconductor mechanism for control of mine lift cages, by V. N. Pelipenko and R. A. Khmel'nitskii
On the improvement of quality of transformer steel, by F. G. Kostenko.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 116. 30 Apr 63, 40p.
JPRS: 18977.
Order from OTS $1.25 63-21718

Trans. of Znanie-Sila (USSR) 1963 [v. 38, no. 1] p. 19-20; and from Pravda, Moscow (USSR) 1963, 27 Jan; 21 Feb; Ekonomicheskaya Gazeta (USSR) 1963 [no. 8(81)] 23 Feb, p. ##7, 41, 42.
##Another trans. is available from OTS $1.75 in 63-21610, JPRS-18779, 18 Apr 63, 63p.

DESCRIPTORS: *Industrial production, *Metallurgy, *Steel, *Smelting, *Powder metallurgy, Management engineering, Construction, *Bearings, *Transportation, Railroad cars, *Rolling mills.

Contents:
Description of oxygen-converter process and its advantages over open-hearth steel production, by B. Fomin
Tremendous success in converting a Moscow plant to modern powder metallurgy process, by A. Denisov
Losses in metallurgical production of the Ukraine due to unpreparedness for the winter season and Ukrainian Conference of Metallurgists, by A. Nizhegorodov, A.
##Criticism of the rate of building oxygen converter shops at different Soviet plants, by V. Peredereev
Substitution of steel inserts for bronze at Makeevka metallurgical plant, by S. Suflarskii
Proposal to unload ferroalloys in open railroad cars at the Chelyabinsk electrometallurgical combine, by V. Arkhipov
Insufficient hardness of roll barrels for rolling mills supplied by the heavy machinery plant at Elektrostal, by Burbelo.

USSR INDUSTRIAL DEVELOPMENT: SOVIET FERROUS METALLURGY NO. 117. 9 May 63, 56p.
JPRS: 19129.
Order from OTS $1.50 63-21795

Trans. of Nauchno-Tekhnicheskie Obshchestva SSSR, 1963 [v. 5] no. 1, p. 29-30, 39; and from Ekonomicheskaya Gazeta (USSR) 1963, no. 5[78] 2 Feb, p. 4-9; Pravda, Moscow (USSR) 1963, 4 Feb; 12 Feb, p. 2; Izvestiya (USSR) 1963, 1 Feb, p. 1.

DESCRIPTORS: *Industrial production, *Metallurgy, *Steel, Processing, *Natural gas, *Oxygen, *Rolling mills, *Automation, *Industrial plants, Construction, Scientific organizations, *Casting, *Electromagnetism.

Contents:
Introducing natural gas and oxygen into metallurgy
Automate the control of rolling operations, by N. Molchanov
Expedite the construction of the converter shop at Zhdanov, by D. Akul'shin
Technical progress at the Zlatoust metallurgical plant, by Yu. Ya. Tishkov and others
Activities of the scientific and technical societies of metallurgy in the Ukraine
Introducing technical progress at the Lutugino rolling-mill rolls plant, by P. Linnik and V. Nezhinskii
Introducing electromagnetism into steel casting techniques, by L. Verte
Expedite the construction of the Nizhnii-Tagil oxygen converter shop, by V. Biryukov.

Bardenheuer, Peter and Bleckmann, Richard.
THE PRIMARY CRYSTALLIZATION OF STEEL UNDERCOOLING ABILITY AND NUCLEUS FORMATION IN THE LIQUID CONDITION. [1959] [32]p. 19 refs.
Order from SLA $3.60 62-14406

Trans. of [Kaiser-Wilhelm-Institut für Eisenforschung, Dusseldorf. Mitteilungen (Germany) 1939] v. 21, no. 13 [p. 201-212].

DESCRIPTORS: *Steel, *Crystallization, Cooling, Melting, Nucleation, *Phase studies, Nuclei, Thermodynamics, Liquid metals.

Chukhleb, A. N. and Martynov, V. P.
CHANGE IN THE PHASE COMPOSITION OF STEELS OF TYPE 18-8 IN DEPENDENCE ON THE TEMPERATURE AND THE DEGREE OF DEFORMATION. [1963] 6p. 3 refs.
Order from OTS or SLA $1.10 63-14700

Trans. of #Metallovedenie i Term[icheskaya] Obrab[otka] Met[allov] (USSR) 1959, no. 9, p. 44-46. Another trans. is available from HB $2.25 as HB-4972, Apr/May 61.

DESCRIPTORS: *Steel, *Austenite, Phase studies, Temperature, Deformation, Metallurgy.

Kalivoda, Ales.
RETAINED AUSTENITE. Jan 63 [11]p. 12 refs.
Order from SLA $1.60 63-10663

Trans. of Hutnicke Listy (Czechoslovakia) 1961, v. 16, no. 2, p. 135-138.

DESCRIPTORS: *Austenite, Metallurgy, *Steel, Chromium alloys, Nickel alloys, Molybdenum alloys, Mechanical properties, Quenching (Coding), Temperature, Decomposition, Dynamics.

Topics: Significance of retained austenite in construction steels; data on the influence of retained austenite on mechanical properties; study of the retained austenite content in the Cr-Ni-Mo steels using a magnetometer depending on the thermal conditions of austenitization and the cooling rate on quenching, observation of retained austenite on tempering at 400°C; and analysis of results. (Author)

Kletskin, G. I. and Ozerina, L. Ya.
EXPERIENCE IN THE DEVELOPMENT AND ADOPTION OF A PRODUCTION TECHNIQUE FOR CAST-IRON MODIFIED WITH MAGNESIUM. Dec 58 [13]p. Davy Trans. 188; BISI Trans. 1102; [DSIR] NLL M. 4066.
Order from OTS or SLA $1.60 62-13197

Trans. of mono. Poluchenie Otlivok iz Vysokoprochnogo Chuguna (Production of High-Strength Iron Castings) ed. by L. I. Fantalov, Moscow, 1955, p. 182-191. Another trans. is available from Mt, Jan 60.

DESCRIPTORS: *Casting, *Iron alloys, *Magnesium alloys, Production

Experimental and development work on a casting technique for cast iron modified with magnesium was carried out under production conditions in the output of fabricated parts for machine tools and forging presses from 50 - 1,500 kilos in weight. Pouring into the moulds was carried out from 2 - and 3.5-ton capacity ladles. (Author)

Nikolaev, N. A.
INVESTIGATION OF THE QUALITY OF A CONTINUOUSLY CAST STEEL INGOT. Paper from All-Union Conference on the Continuous Castings of Steel (no. 1) 17-19 Oct 55. Apr 60 [19]p. BISI Trans. 1609; [DSIR] NLL M. 4935.
Order from OTS or SLA $1.60 62-25880

Trans. of mono. [Nepreryvnaya Razlivka Stali] (Continuous Casting of Steel) Moscow, 1956, p. 49-61. Another trans. is available from OTS or SLA $1.60 as 62-14671 [1960] [17]p.

DESCRIPTORS: *Steel, *Casting, Castings, Quality control, Production.

For Abstract See Technical Translations 2:90, 1963.

Patterson, Wilhelm and Bodmer, Ernst.
ULTRASONIC TESTING OF CAST IRONS WITH LAMINAR AND SPHEROIDAL GRAPHITE FORMATION. [1962] [16]p. 20 refs.
Order from SLA $1.60 62-14424

Trans. of Giesserei, Technische-Wissenschaftliche Beihefte (West Germany) 1957, no. 17, p. 909-917.

DESCRIPTORS: *Non-destructive testing, *Ultrasonic radiation, Velocity, *Cast iron, *Graphite, Elasticity, Shear stresses.

Ultrasonic speed measurements were made for both longitudinal and transverse waves in test pieces of cast iron with differing textural formations. From the different speeds recorded it is possible to differentiate between a laminar and spheroidal graphite formation. Using the same measurements it is possible to make an approximation of the modulus of elasticity in shear and in tension, and Poisson's ratio. (Author)

Pepperhoff, W. and Bühler, H.-E.
METALLOGRAPHIC DETECTION OF FERRITE FORMATION IN AUSTENITIC CHROMIUM-NICKEL STEEL. May 63.
Order from BISI £2 5s BISI-3090

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1962, v. 33 [no. 10] p. 711-713.

DESCRIPTORS: *Metallography, *Ferrites, Austenite, *Chromium alloys, *Nickel alloys, *Steel, Grain structures (Metallurgy), Heat treatment, Phase studies Martensite.

Remy, G.
CONTRIBUTION TO THE STUDY OF THE FORGEABILITY OF STEELS. [1962] [10]p. (graphs omitted) 13 refs.
Order from SLA $1.10 62-14545

Trans. of Centre de Documentation Siderurgique. Circulaire d'Informations Techniques (France) 1955 [v. 12] no. 12, p. 2413-2419.

DESCRIPTORS: *Steel, *Forging, Hot working, Velocity, Mechanical properties.

The experimental results seem to prove the existence of a general influence, for different methods of distortion, of the speed of hot deformation on the capacity for hot deformation. The existence of such an influence makes it possible to explain the normal or abnormal behaviour of the same steel depending on which type of hot mechanical deformation is employed during forming. (Author)

Roos, M. A.
INFLUENCE OF BORON AND TELLURIUM ON CAST IRON. May 63.
Order from BISI £2 10s BISI-3174

Trans. of mono. (paper presented at) Annual Congress of the Association Technique de Fonderie (no. 35) Lille, 30 Sep-3 Oct [62].

DESCRIPTORS: *Boron, *Tellurium, *Cast iron, Chemical analysis, *Hardness, Mechanical properties, Graphite, Pearlite, Carbides.

Schmidtmann, E., Biermann, W., and Schenck, H.
INFLUENCE OF OVERALL PRESSURE ON THE DECOMPOSITION OF AUSTENITE INTO PEARLITE AND INTERMEDIATE STAGE STRUCTURE. May 63.
Order from BISI £5 10s BISI-2807

Trans. of Archiv für das Eisenhüttenwesen (West Germany) 1961, v. 32[no. 12] p. 843-850.

DESCRIPTORS: Pressure, Decomposition, *Austenite, *Pearlite, Structural properties, *Steel.

Shao, Hsiang-hua and Pang, Yueh-chu.
REDUCING SEGREGATION IN RIMMING STEEL. I. BLOWING OXYGEN OR COMPRESSED AIR INTO SOLIDIFYING INGOTS. Apr 60 [15]p. 16 refs.
BISI Trans. 1657 pt. 1; [DSIR] NLL M.4934.
Order from OTS or SLA $1.60 62-25879

Summary trans. of [Chin Shu Hsüeh Pao] (Chinese People's Republic) 1958, v. 3, no. 2, p. 85-98.
Another trans. is available from OTS or SLA $1.60 as 62-14674 [1962] [13]p.

DESCRIPTORS: *Steel, *Casting, Oxygen, Compressed air, Blowers, Quality control.

For Abstract See Technical Translations 8: 280, 1962

Vinograd, M. I.
OPTIMUM CHEMICAL COMPOSITION OF STEEL 1Kh18N9T, tr. by R. C. Murray. Oct 58 [6]p. [BISI] Trans. 1090; [Trans.] no. 5004; [DSIR] NLL M.4069.
Order from OTS or SLA $1.10 62-13205

Trans. of #Metallurg (USSR) 1957 [v. 2, no. 5] p. 13-16.

DESCRIPTORS: *Steel, Chemical analysis, Standards, Production, Steel alloys, Titanium alloys, Carbon alloys, Chromium alloys, Silicon alloys, Nickel alloys, Manganese alloys

Light Metals

Dobatkin, V. I. and Simakovskii, B. I.
RADIOACTIVE ISOTOPE STUDY OF CRYSTALLIZATION OF ALUMINUM DURING CONTINUOUS CASTING. 23 May 63, 12p. 2 refs. JPRS: 19372.
Order from OTS $0.50 63-21902

Trans. of Liteinoe Proizvodstvo (USSR) 1960, no. 10, p. 34-36.

DESCRIPTORS: *Casting, *Aluminum, Crystallization, *Radioactive isotopes, *Castings.

Gurevich, S. M.
CERTAIN CHARACTERISTICS OF WELDING TITANIUM UNDER FLUX. 29 Mar 63 [18]p. 22 refs. FTD-TT-63-22; AD-402 468.
Order from OTS or SLA $1.60 63-19425

Unedited rough draft trans. of Avtomaticheskaya Svarka (USSR) 1957 [v. 10] no. 5, p. 38-48.

DESCRIPTORS: *Titanium, *Welding, Metallurgy, *Welding fluxes, Chemical properties, Slags, Chemical reactions, Welding electrodes, Design.

Explained are metallurgical technological characteristics of automatic welding of titatium under flux. It is shown, that during flux-slag reaction with the metal are possible interchange reactions of titanium and its oxides with components of oxygen-less flux. Discussed are the characteristics of melting the metal and the thermal cycle in the near-seam zone during the welding of titanium. (Author)

Gvozdov, S. P. and Zhurenkova, A. A.
THE TITANIUM-HYDROGEN SYSTEM (Sistema Titan-Vodorod). Mar 63 [10]p. 5 refs. RTS-2193.
Order from OTS or SLA $1.10 63-15948

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Chernaya Metallurgiya (USSR) 1960, no. 9, p. 8-13.

DESCRIPTORS: *Titanium compounds, *Hydrides, Hydrogen, *Absorption, Lattices, Solutions, Impurities, Hysteresis, Temperature.

The absorption of hydrogen by titanium constitutes a dissolution of the gas in the metal, associated with the hydrogen entering into the metal lattice in atomic form, which results in the formation of interstitial solid solutions. Chemically pure titanium powder can absorb 465.5 m^3 of hydrogen per gramme of titanium, which corresponds to the stoichiometric formula TiH_2.

Titanium hydride with the formula TiH_2 is formed at a temperature of 400°C and a hydrogen pressure of 10 mmHg. Contaminations present in the titanium powder retard the hydride formation. The presence of small quantities of nitrogen and oxygen makes the titanium hydride unstable above 500°C. The hydrogen saturation- and degassing isotherms display a hysteresis the loop of which increases as the impurity content increases. (Author)

Nonferrous (except light) Metals

USSR INDUSTRIAL DEVELOPMENT: SOVIET NON-FERROUS METALLURGY NO. 61. 16 May 63, 37p. JPRS: 19233.
Order from OTS $1.25 63-21835

Trans. of 8 selected articles from Feb 63 issues of 6 Russian newspapers and 6 abstracts from Referativnyi Zhurnal. Gornoe Delo (USSR) 1963, no. 1.

DESCRIPTORS: *Industrial production, *Metallurgy, Industrial plants, Oxygen, Furnaces, Electric power production, Presses (Machinery), Gems (Minerals), Ion exchange resins, Rock (Geology), Copper, Ores (Metal sources), Diamonds, Mining engineering, Hydraulic systems, Gold, Recovery.

Contents:
Expedite the construction of the Kirovabad aluminum plant, by Z. Elizarov and A. Krichevskii
Introduce oxygen at the Balkhash mining and metallurgical combine, by M. Samarin
Eliminate power shortages at the Balkhash mining and metallurgical combine, by M. Samarin
Adventures of the inventor Yurchenko, by A. Avdeenko
A private jewelry enterprise is discovered and shut down, by V. Eremenko
Ion exchange resins are produced at the Karbolit plant, by A. Syrovatkin
The uses of senites, by M. Darbinyan
Increasing production at the Kafan copper ore combine, by G. Ovanesyan
History of the Soviet diamond industry, by S. Ustinov
Means of raising labor productivity and improving the technical economic indices in the underground mining of ore deposits, by S. Ustinov
Development of the Zyryanovsk polymetal deposit, by G. Butkevich
Development of the gay copper-zinc deposit, by S. Ustinov
Development of placer deposits by the hydraulic method, by A. Gal'perin
Benefication of gold-bearing ores with carbonaceous, by E. Shifrina.

USSR INDUSTRIAL DEVELOPMENT: SOVIET NON-FERROUS METALLURGY NO. 63. 29 May 63, 42p. JPRS: 19491.
Order from OTS $1.25 63-21959

Trans. of Partiinaya Zhizn' (USSR) 1963, no. 2, p. 21-22; Promyshlennosti Armenii (USSR) 1962 [v. 5] no. 1, p. 21-22; Referativnyi Zhurnal. Tekhnologiya Mashinostroeniya (USSR) 1963, no. 1, p. 15, 27; and 8 selected articles from Feb-Mar 63 issues of 7 Russian newspapers.

DESCRIPTORS: *Industrial production, *Metallurgy, Smelting, Rare earth elements, Economics, Graphite, Hydroelectric power systems, Electric power production, Thermoelectricity, Concrete, Asbestos, Deposits, Geology, Mining engineering, Lead, Zinc, Oxygen, Copper, Molybdenum, Titanium alloys, Mechanical working.

Contents:
A new smelting device in operation in Kazakhstan
Workers of Vostochno-Kazakhstanskaya oblast pledge to increase recovery of non-ferrous and rare metals
Planned increase of production of non-ferrous metals in Vostochno-Kazakhstanskaya Oblast
Zhdanov graphite plant has difficulties in obtaining raw materials, by M. Korotkov
Advantages of thermoelectric power in non-ferrous metallurgy, by V. Romanovskii
Achievements by workers at the Erevan beneficiation plant, by R. Mirzoyan
Initiation of production of plastic concrete, by E. Torgovitskii
The progress of the city of Dzhetygara, by V. Vlasov
Positive experience at the Ust'-Kamenogorsk lead and zinc combine in the industrial use of oxygen
Raising of labor productivity at the Kadzharan copper and molybdenum combine, by Sh. Gasparyan
Intricate shape casting of titanium alloys
Technology of the smelting of large ingots of titanium alloys
Melting down of titanium with an electric arc under a melting flux layer.

Hofmann, W., Weber, R., and others.
LEAD AND LEAD ALLOYS [AND] HARDENED BEARING METALS. 16 Aug 49, 2p. 3 refs.
Order from OTS or SLA $1.10 63-14282

Trans. from mono. FIAT Review of German Science 1939-46, Nonferrous Metallurgy, pt. II [1948] (PB-85011).

DESCRIPTORS: *Lead, *Lead alloys, Metals, Bearings, Hardness, *Barium.

Pogorelyi, A. D. and Morozova, N. K.
THE BEHAVIOR OF GERMANIUM DISULFIDE AT HIGHER TEMPERATURES. [1962] [11]p.
Order from OTS or SLA $1.60 63-15314

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Tsvetnaya Metallurgiya (USSR) 1960 [v. 3] no. 4, p. 113-121.

DESCRIPTORS: *Ores (Metal sources), Processing, *Germanium compounds, Sulfides, Crystals, Preparation, Physical properties, Calorimetry, Vapor pressure, Dissociation, High temperature research.

A procedure has been developed for preparing air-stable crystalline GeS_2, and the melting point and some other characteristics of the crystals have been determined. The variation of the saturation vapor pressure of GeS_2 with temperature has been determined throughout the 500° to 700°C range, and the dissociation constant of GeS_2 into GeS and S_2 has been determined in the 500° to 700°C range. The change of the isobaric potential in the reaction $2\,GeS_{gas.} + S_2 = 2\,GeS_{2\,cryst.}$ can be calculated from the equation:
$\Delta G^{\circ}_{T} = -162,0+0,1377T$ kilocal. (Author)

Schulenburg, W.
TITANIUM: ZIRCONIUM: THORIUM: URANIUM.
14 July 49, 6p. 3 refs.
Order from OTS or SLA $1.10 63-14302

Trans. from mono. FIAT Review of German Science 1939-46, Non-Ferrous Metallurgy, pt. I [1948] (PB-95679).

DESCRIPTORS: *Titanium, *Zirconium, *Thorium, *Uranium.

Structural Metallurgy and Corrosion

Elze, J.
SEALING TEST FOR ANODIC COATINGS ON ALUMINUM. [1962] 3p. 1 ref.
Order from SLA $1.10 63-10146

Trans. of Aluminium (West Germany) 1962, v. 38, no. 3, p. 161.

DESCRIPTORS: *Aluminum, *Corrosion inhibition, Protective treatments, Coatings, Oxides, Films, *Seals (Stoppers), Test methods, *Dyes.

The rapid dye check proposed by Vereinigte Aluminium-Werke AG is quite suitable to evaluate the degree of sealing in an anodically produced oxide film on aluminum. The test is rather simple and the results are reproducible. (Author)

Malyshev, G. A.
CORROSION DE CARROCERIAS Y MEDIDAS PARA COMBATIRLA (Korroziya Kuzovov i Mery Bor'by s Nei) (Vehicle Body Corrosion and Anti-Corrosion Measures). 10p. CID: 62-117.
Order from OTS, ETC or CID $1.00 62-26766

Trans. in Spanish of Avtomobil'naya Promyshlennost' (USSR) 1958, no. 8, p. 38-39.

DESCRIPTORS: *Corrosion inhibitors, Vehicles.

Mankina, N. N.
INVESTIGATION OF CONDITIONS OF FORMATION OF IRON OXIDE DEPOSITS. [1962] 7p. (figs. tables omitted) 3 refs.
Order from OTS or SLA $1.10 63-15154

Trans. of Teploenergetika (USSR) 1960 [v. 7] no. 3, p. 8-12.

DESCRIPTORS: *Oxides, *Iron compounds, *Scale, Hydrogen ion concentration, Feed water, Hydrazines, Boilers, *Corrosion inhibition.

Results of experimental investigations of the process of iron oxide scale formation are presented, and methods for decreasing and practically preventing scale formation are proposed. (Author)

Neunzig, H. and Röhrig, V.
ABOUT THE EFFECTS OF SEALING ON THE QUALITY OF OXIDE FILMS. [1962] 15p. (figs. omitted) 5 refs.
Order from SLA $1.60 63-10145

Trans. of Aluminium (West Germany) 1962, v. 38, no. 3, p. 150-154.

DESCRIPTORS: *Aluminum, *Corrosion inhibition, Protective treatments, Oxides, Films, *Seals (Stoppers), Acids, Surface-active substances, Cobalt compounds, Nickel compounds, Acetates, Water vapor.

The tests showed that excellent corrosion protection was obtained only after adequate sealing and if the parts had been anodized to the necessary film thickness. The best sealing was obtained in water vapor where the pores are closed by the formation of aluminum hydroxide. Parts sealed in water vapor will always be sealed properly. The same sealing quality can be obtained by sealing in boiling water. However, this technique bears the hazard of water contamination during processing. Sealing by the formation of heavy metal hydroxides or by the deposition of other reaction products usually decreases the corrosion resistance of the oxide film. The sealing quality could be determined most reliably and simply by the rapid dye check and by the acetified peroxide salt solution test. These tests have often led to the identification and the elimination of defect sources during production anodizing. (Author)

Nottes, Ernst G.
CORROSION PROTECTION BY CHEMICALS IN PETROLEUM PROCESSING. PT. I. FUNDAMENTALS OF CORROSION AND CORROSION INHIBITORS. [19 Aug 62] 14p. 22 refs.
Order from SLA $1.60 63-10284

Trans. of [Erdöl und Kohle-Erdgas-Petrochemie] (West Germany) 1962, v. 15, no. 7, p. 538-541.

DESCRIPTORS: *Corrosion inhibition, Chemical compounds, *Petroleum, Refineries, Corrosion, Antioxidants, Fuels, *Amines, *Acetylenes, *Benzenes.

Nottes, Ernst G.
CORROSION PROTECTION BY CHEMICALS IN PETROLEUM PROCESSING. PT. II. TESTS AND MEASUREMENTS, PROCESS CONTROL AND APPLICATION. [18 Sep 62] 19p. (figs. omitted) 8 refs.
Order from SLA $1.60 63-10285

Trans. of [Erdöl und Kohle-Erdgas-Petrochemie (West Germany) 1962, v. 15, no. 8, p. 640-643].

DESCRIPTORS: *Corrosion inhibition, *Petroleum, Refineries, Test methods, Corrosion.

(See also 63-10284)

Putilova, I. N.
COEFICIENTE DE TEMPERATURA DE LA VELOCIDAD DE CORROSION EN PRESENCIA DE INHIBIDORES (Temperaturnyi Koeffitsient Skorosti Korrozii v Prisutstvii Ingibitorov) (Corrosion Rate Temperature Coefficient in the Presence of Inhibitors). 8p. 8 refs.
CID: 62-198.
Order from OTS, ETC or CID $0.90 62-26847

Trans. in Spanish of Zhurnal Fizicheskoi Khimii (USSR) 1959 [v. 33] no. 1, p. 226-227.

DESCRIPTORS: *Corrosion inhibition, Velocity, Temperature, Corrosion.

Romanov, V. V.
CORROSION OF MAGNESIUM, tr. by M. E. 11 Apr 63, 47p. 95 refs. I-8207.
Order from OTS $1.25 63-11618

Trans. of mono. Korroziya Magniya, Moscow, 1961, 68p.

DESCRIPTORS: *Corrosion, *Magnesium, Electrolytes, Atmosphere, Acids, Alkali metal compounds, Organic compounds, Metals, Alloys, Temperature, Impurities, Heat treament, *Protective treatments, Structural parts, Moisture, Stresses, Polarization, *Fracture (Mechanics), Sea water, Bibliographies.

NUCLEAR PHYSICS AND NUCLEAR CHEMISTRY

Agre, A. L. and Korodin, V. I.
A PROPOS DE LA DISTRIBUTION DES DÉCHETS RADIOACTIFS DANS LES RÉSERVOIRS D'EAU STAGNANTE, tr. by Kefeli. 30 Aug 62 [18]p. 25 refs.
CEA Trans. no. R 1655.
Order from OTS or SLA $1.60 63-15492

Trans. in French of #Med[itsinskaya] Radiol[ogiya] (USSR) 1960, v. 5, no. 1, p. 67-73.

DESCRIPTORS: *Radioactive waste, Distribution, *Reservoirs, Water, Contamination, Colloids, Microorganisms, Absorption, Hydrogen ion concentration.

Kurchatova, L. N. and Kurchatov, B. V.
FREMSTILLING AF KONCENTREREDE PRAEPARATER C136 OG Br82 VED EN METODE, HVORVED KAERNER AFGIVES VED BESTRÅLING I NEUTRONFELTER AF STOR TAETHED (Poluchenie Konsentrirovannykh Predaratov i Br82 Metodom Yader Otdachi pri Obluchenii v Neitronnykh Polyakh Vysokoi Plotnosti) (Method of Obtaining Concentrated Preparations of C136 and Br82 by Recoil Nuclei under Exposure to High-density Neutron Fields). 27p. (foreign text included) 6 refs. DTC-10.
Order from OTS, ETC or DTC $1.75 62-28792

Unedited draft trans. in Danish of mono. Konferentsiya po Primeneniya Radioizotopov v Fizicheskikh Naukakh i Promyshlennosti [Conference on the Use of Radioisotopes in Physical Sciences and Industry] Copenhagen, 6-[17] Sep 60. [Proceedings, rept.] no. RICC/325.

DESCRIPTORS: *Chlorine, *Bromine, *Isotopes, Production, Neutrons.

Nardelli, G. and Repanai, A.
PHYSICAL PRINCIPLES OF THE TRENNDUSE METHOD, tr. by B. Rigby. 1959 [14]p. 8 refs.
UKAEA IGRL-T/R61; [DSIR NLL] M1487.
Order from OTS or SLA $1.60 62-32401

Trans. of Energia Nucleare (Italy) 1957, v. 4, no. 4, p. 293-300.

DESCRIPTORS: *Isotope separation, *Gaseous diffusion separation, *Mass transfer, Superaerodynamics, Fluid flow, Nozzles, Diffusers, Uranium.

The experimental findings of Becker and his co-workers on the separation of gaseous mixtures, particularly mixtures of isotopes, by the "Trennduse" method are described and the mechanism examined from a physical point of view. (Author)

Skobel'tsyn, D. V., ed.
TRANSACTIONS OF THE PHYSICS INSTITUTE, ACADEMY OF SCIENCES USSR, 1958, VOL. 10.
21 Mar 63 [248]p. 64 refs. FTD-TT-62-958.
Order from OTS or SLA $16.00 63-19191

Unedited rough draft trans. of Akademiya Nauk SSSR. Fizicheskii Institut. [Trudy] 1958, v. 10.

DESCRIPTORS: *Physics, Theory, Supersonic flow, Gas flow, Equations of motion, *Nuclear particles, Proton accelerators, Synchrotrons, Particle trajectories, Particle beams, Oscillation, Particles, Magnetic fields, Magnets, Motion, Resonance, Injection, Focusing, *Nuclear physics, Physicists, Particle accelerators.

Contents:
In memoriam Semen Zakharovich Belen'kii
Contribution to the theory of flow of supersonic gas past a wedge, by S. Z. Belen'kii
Hydrodynamic equations with account of radiation, by S. Z. Belen'kii
Principles of proton synchrotron theory, by M. S. Rabinovich
List of symbols
Radical-phase motion of particles
Fast oscillations of particles
Effect of deviation of the magnetic field from theoretical on the motion of the particles
Resonant phenomena in accelerator with slotted magnet
Injection theory
Strong focusing.

Elementary Particles

Blinov, G. A., Krestnikov, Yu. S., and Pershin, I. I.
OBSERVATION OF THE TRACES OF HIGH-ENERGY IONIZING PARTICLES FROM AN ACCELERATOR BY MEANS OF A PROPANE BUBBLE CHAMBER. [1962] [4]p. 6 refs. [Trans.] 6918.
Order from OTS or SLA $1.10 62-24768

Trans. of Akademiya Nauk SSSR. Doklady, 1954, v. 99, no. 6, p. 929-930.
Other translations are available from LC or SLA mi$1.80, ph$1.80 as 59-17358, AERE Lib/Trans-540 [1959] [4]p. and from OTS or ETC $1.40 as 61-17482, MTWL-1023, 5p.

DESCRIPTORS: *Particles, *Ionization, Particle accelerators, Tracks, Propanes, Ionization chambers.

For abstract see Technical Translations 2: 607, 1959.

Dzhelepov, V. P., Golovin, B. M., and Satarov, V. I.
ELASTIC SCATTERING OF NEUTRONS BY NEUTRONS AT AN ENERGY OF 300 MEV [Uprugoe Rasseyanie Neitronov Neitronami pri Energii 300 Mev].
[1962] 9p. 11 refs. [Trans.] 6925.
Order from OTS or SLA $1.10 62-24767

Trans. of [Akademiya Nauk SSSR. Doklady, 1954, v. 99, no. 6, p. 943-946].
Other translations are available from CCT $5.00 as CCT-1244TT [1959] 4p. and from OTS or ETC $1.55 as 61-17535, MTWL-973, 6p.

DESCRIPTORS: *Neutrons, Neutron beams, Elastic scattering, *Scattering, Energy.

Meshcheryakov, M. G., Neganov, B. S. and others
ANOMALOUS VARIATION IN THE CROSS SECTION OF ELASTIC SCATTERING OF PROTONS BY PROTONS IN THE REGION 460-660 MEV [Anomal'noe Izmenenie Secheniya Uprugogo Rasseyaniya Protonov Protonami v Oblasti 460-660 Mev.]. [1962] 5p. 11 refs. [Trans.] 6917.
Order from OTS or SLA $1.10 62-24769

Trans. of Akademiya Nauk SSSR. Doklady, 1954, v. 99, no. 6, p. 959-961.
Other translations are available from CCT $5.00 as CCT-1246TT [1959] 3p.; OTS or ETC $1.40 as 61-17533, MTWL-971, 5p.; LC or SLA mi$1.80, ph$1.80 as 59-17359, AERE Lib/Trans-545 [1959 [5]p.

DESCRIPTORS: *Protons, *Scattering, Proton beams, Elastic scattering, Mesons, Energy.

(For abstract see Technical Translations 2: 607, 1959.

Meshcheryakov, M. G., Bogachev, N. P. and others.
ELASTIC SCATTERING OF PROTONS BY PROTONS AT AN ENERGY OF 460 MEV [Uprugoe Rasseyanie Protonov Protonami pri Energii 460 Mev.]. [1962] 8p. 12 refs. [Trans.] 6933.
Order from OTS or SLA $1.10 62-24766

Trans. of [Akademiya Nauk SSSR. Doklady, 1954, v. 99, no. 6, p. 955-958].
Other translations are available from CCT $5.00 as CCT-1245TT [1959] 4p.; OTS or ETC $1.55 as 61-17534, MTWL-972, 6p.

DESCRIPTORS: *Protons, Proton beams, Elastic scattering, Energy, *Scattering.

For abstract see Technical Translations 2: 83, 1959.

Meshcheryakov, M. G. and Neganov, B. S.
FORMATION OF MESONS IN THE REACTION $p + p \rightarrow d + \pi^+$ IN THE REGION OF 510-660 MEV [Obrazovanie Mezonov v Reaktsii $p + p \rightarrow d + \pi^+$ v Oblasti 510-660 Mev]. [1962] 5p. 6 refs. [Trans.] 6947.
Order from OTS or SLA $1.10 62-24762

Trans. of [Akademiya Nauk SSSR. Doklady, 1955, v. 100, no. 4, p. 677-679].
Other translations are available from SLA as RT-2914; CCT $5.00 as CCT-1253TT [1959] 3p.; OTS or ETC $1.40 as 61-17538, MTWL-976, 5p.

DESCRIPTORS: *Proton beams, Energy, Protons, *Mesons.

For abstract see Technical Translations 2: 207, 1959.

Selektor, Ya. M., Nikitin, S. Ya. and others.
SCATTERING OF PROTONS OF ENERGY 460-660 MEV BY PROTONS [Rasseyanie Protonov s Energyami 460-660 Mev Protonami]. [1962] 5p. 8 refs. [Trans.] 6954.
Order from OTS or SLA $1.10 62-24760

Trans. of Akad[emiya] Nauk SSR. Dokl[ady] 1954, v. 99, no. 6, p. 967-969.
Other translations are available from ATS as RJ-238 and ATS-20G5R, 3p.; OTS orETC $1.40 as 61-17532, MTWL-970, 5p.

DESCRIPTORS: *Protons, *Scattering, Energy, Proton beams.

Tyapkin, A. A., Kozodaev, M. S., and Prokoshkin Yu. D.
GENERATION OF π^0-MESONS BY PROTONS AT 670 MEV ENERGY ON NUCLEI OF VARIOUS ELEMENTS [Obrazovanie π^0-Mezonov Protonami s Energiei 670 Mev na Yadrakh Razlichnykh Elementov]. [1962] 7p. 5 refs. [Trans.] 6949.
Order from OTS or SLA $1.10 62-24761

Trans. of [Akademiya Nauk SSSR. Doklady, 1955, v. 100, no. 4, p. 689-692.
Other translations are available from SLA as RT-2913; SLA mi$1.80, ph$1.80 as 59-17462, AERE Lib/Trans-553, 1955 [7]p.; CCT $5.00 as CCT-1254TT [1959] 3p.; OTS or ETC $1.55 as 61-17537, MTWL-975, 6p.

DESCRIPTORS: *Nuclei, Proton beams, *Mesons, Chemical elements, Energy.

For abstract see Technical Translations 2: 746, 1959.

Instruments and Installations

Aglintsev, K. K., Kodyukov, V. M. and others.
APPLIED DOSIMETRY: TABLE OF CONTENTS, tr. by A. Pingell. 30 Apr 63, 4p. N R L Trans. no. 927.
Order from OTS $0.50 63-11630

Partial trans. (table of contents) of mono. Prikladnaya Dosimetriya, Moscow, 1962, 247p.

DESCRIPTORS: *Health physics instrumentation, *Dosimeters, Indexes, Health physics

Pavdernik, J.
MEASUREMENT OF RADIOACTIVITY AT THE CZECHOSLOVAK WATER WORKS LABORATORIES COMPARED WITH FOREIGN MEASUREMENT TECHNOLOGY. 27 Mar 63 [8]p. JPRS: 18391.
Order from OTS $0.50 63-21435

Trans. of Isotopentechnik (East Germany) 1962, v. 2, no. 11, p. 341-343.

DESCRIPTORS: Measurement, *Radioactivity, *Water, *Radium, *Uranium, Absorption, Health physics, *Radiation measurement systems, *Radiation monitors.

The Czechoslovak Water Works employ extremely sensitive and accurate methods to measure non-continuous overall β-activity and the radium content of water, using uncomplicated instruments. The basic principles of measuring water radioactivity, established by the CSSR Academy of Sciences, have been used. This article points out their advantages over other principles of measurement. (Author)

Vasil'ev, A. A.
POSSIBILITY OF LOWERING THE INJECTION ENERGY IN ACCELERATORS AT SUPER-HIGH ENERGIES. 16 Apr 63 [9]p. 4 refs. JPRS: 18723.
Order from OTS $0.50 63-21583

Trans. of Akademiya Nauk SSSR. Doklady, 1963, v. 148, no. 3, p. 577-580.

DESCRIPTORS: *Particle accelerators, *Betatrons, *Oscillation, Injection, Energy, Particle trajectories, Differential equations

Zavoiskii, E. K., Smolkin, G. E. and others.
THE LUMINESCENT CHAMBER [Lyuminestsentnaya Kamera]. [1962] 3p. 2 refs. [Trans.] 6937.
Order from OTS or SLA $1.10 62-24763

Trans. of Akademiya Nauk SSSR. Doklady, 1955, v. 100, no. 2, p. 241-242.
Other translations are available from SLA as RT-2856; CCT $5.00 as CCT-1248TT [1959] 3p.; OTS or ETC $1.40 as 61-17542, MTWL-980, 5p.

DESCRIPTORS: *Ionization chambers, *Luminescence, Construction, *Particle trajectories.

For abstract see Technical Translations 2: 158, 1959.

Nuclear Engineering and Power

Kliefoth, Werner.
GAS-COOLED HIGH TEMPERATURE REACTORS. [1962] 8p. 6 refs.
Order from SLA $1.10 63-10243

Trans. of Atom[kern]energie (West Germany) 1961, v. 6, Mar, p. 100-103.

DESCRIPTORS: Electric power production, *Nuclear power plants, *Power reactors, Gas turbines, Nitrogen, Cooling, Temperature.

A portable power station of 2 MW on a nuclear basis with a closed gas turbine is being completed. A high-temperature reactor operated with nitrogen as the working gas already ran for 48 hours with a thermal capacity of 1850 kW. Details of the reactor and the gas turbine are given. In the USA a reactor experiment (BORE) is also being carried out as part of a high temperature reactor system incorporating a closed cycle gas turbine for ship board application (MGCR). Finally, details on the high-temperature reactor system (HTGR) of General Atomic for a 40 MWe prototype are given and it is reported that a 300 to 500 MWe plant is being studied. (SIC) (Author)

Podesi, M.
VALG AF MATERIALE TIL FREMSTILLING AF RADIOISOTOPER I REAKTORER (Volba Materialu pro Výrobu Radioisotopú v Reaktoreck) (Choice of Material for the Production of Radioisotopes in Reactors). 9p. (foreign text included) 9 refs. DTC-11.
Order from OTS, ETC or DTC $0.95 62-28793

Unedited draft trans. in Danish of Chemicky Prumysl (Czechoslovakia) 1959, v. 9 [34] p. 522-523.

DESCRIPTORS: *Reactor kinetics, *Radioactive isotopes, Production, Materials.

Radioactivity

Arkhipov, N. and Girenko, V.
ATOMIC EXPLOSIONS AT SEA: LIGHT RADIATION. [1962] 6p. [Trans.] 6934.
Order from OTS or SLA $1.10 62-24765

Trans. from Sovetskii Flot (USSR) 1954, 28 Nov.

DESCRIPTORS: *Nuclear explosions, Oceans, *Light, Radiation effects, Shielding, Attenuation, Absorption, Ultraviolet radiation, Infrared radiation.

Bibergal', A. V., Leshchinskii, N. I. and others.
SOME PROBLEMS OF CALCULATION AND DESIGN OF HIGH-ACTIVITY GAMMA UNITS. 2 Aug 61 [20]p. (figs. refs. omitted).
Order from SLA $1.60 63-10847

Trans. of mono. Large Radiation Sources in Industry, Proceedings of a Conference on the Application of Large Radiation Sources in Industry and Especially to Chemical Processes, Warsaw, 8-12 Sep 59 [pub. Vienna, 1960] v. 1, p. 163-[177].

DESCRIPTORS: *Radioactive isotopes, Isotopes, *Gamma rays, *Cobalt, *Cesium, Radiochemistry, Numerical analysis.

Glushko, A. [P.].
ATOMIC WEAPONS AND ANTI-ATOMIC DEFENSE: ACTION IN RADIOACTIVE CONTAMINATION. [1962] 5p. Trans. 6989.
Order from OTS or SLA $1.10 62-24759

Trans. from mono. [Atomnaya Oruzhie i Protivoatomnaya Zashchita, Moscow, 1958].

DESCRIPTORS: *Radiation hazards, Countermeasures, Armed Forces operations, Military personnel, Radioactivity, Radioactive fall-out, Radiological contamination.

See also 60-17622

Kulikova, G. M.
UEBER DIE MÖGLICHKEIT DER VERWENDUNG VON FADENALGEN ZUR REINIGUNG RADIOAKTIV KONTAMINIERTER WÄSSER (On the Possibilities to Apply Filamentous Algae for the Purification of Water Reservoirs Polluted with Radioactive Substances). 4p.
Order from TIB $1.10

Trans. in German of Akademiya Nauk SSSR. Doklady, 1960, v. 135, no. 4, p. 978-980.

DESCRIPTORS: *Algae, *Purification, Water, Contamination, *Radioactivity, Radiological contamination.

PHYSICS

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 168 (PHYSICS AND MATHEMATICS SERIES). 13 May 63, 11p.
JPRS: 19165.
Order from OTS $0.50 63-21811

Consists of abstracts of articles from selected scientific and technical journals of East Germany and Rumania.

DESCRIPTORS: Abstracts, *Physics, *Mathematics, Monte Carlo method, Probability, Neutron flux, Reactor fuel processing, Beryllium, Bismuth, Radioactive isotopes, Radiation effects, Radiochemistry, Conferences, Nuclear industrial applications, Materials, Transistors, Circuits, Differential equations, Satellite vehicle trajectories, Stars, Periodic variations, Planets, Satellites (Artificial), Theodolites, *East Germany, *Rumania.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 179 (PHYSICS AND MATHEMATICS SERIES). 22 May 63, 3p.
JPRS: 19329.
Order from OTS $0.50 63-21884

Abstract trans. of Magyar Fizikai Folyoirat (Hungary) 1963, v. 11, no. 1, p. 1-5, 7-17, 19-[70].

DESCRIPTORS: *Abstracts, *Physics, *Mathematics, Gamma rays, Dose rate, Rhenium, Nuclei, Neutron cross sections, Planets, Nuclear reactions, Electron microscopes, Exposure meters, Superconductivity, *Hungary.

ABSTRACTS FROM EAST EUROPEAN SCIENTIFIC AND TECHNICAL JOURNALS NO. 184 (PHYSICS AND MATHEMATICS SERIES). 28 May 63, 5p.
JPRS: 19436.
Order from OTS $0.50 63-21932

Abstract trans. of [Polska Akademia Nauk]. Bulletin: Serie des Sciences Mathematiques, Astronomiques et Physiques, 1963, v. 11, no. 2, p. 39-59, 61-65, 67-83.

DESCRIPTORS: *Abstracts, *Physics, *Mathematics, Groups (Mathematics), Algebraic topology, Nonlinear systems, Control systems, Trajectories, Differential equations, Electromagnetic waves, Diffraction, Ferromagnetic materials, Single crystals, Azulenes, Fluorescence, Absorption spectra, *Poland.

ABSTRACTS PERTAINING TO COMMUNIST CHINA IN SOVIET ABSTRACTS JOURNALS NO. 63 (PHYSICS SERIES). 20 May 63, 5p. JPRS: 19277.
Order from OTS $0.50 63-21859

Trans. of selected abstracts from Referativnyi Zhurnal. Fizika (USSR) 1963, no. 1.

DESCRIPTORS: *Abstracts, *Physics, *China, Test methods, *Photographic emulsions, Radiation measurement systems components, *Oscillation, Theory, Electronics, *Radio astronomy.

JOURNAL OF APPLIED MECHANICS AND TECHNICAL PHYSICS, 1962, NO. 1: SELECTED ARTICLES. 25 Feb 63 [20]p. 20 refs. FTD-TT-62-1695; AD-299 627.
Order from OTS or SLA $1.60 63-19511

Unedited rough draft trans. of Zhurnal Prikladnoi Mekhaniki i Tekhnicheskoi Fiziki (USSR) 1962, no. 1, p. 15-19, 39-43, 153.

DESCRIPTORS: *Applied mechanics, *Physics, *Magnetohydrodynamics, Convection, *Fluid dynamics properties, *Reynolds number, *Plasma physics.

Contents:
Magnetohydrodynamic problems concerning settled convection in vertical channels, by S. A. Regirer
On the influence of Prandtl number variability on the flow in the vicinity of critical point of an obtuse body at small Reynolds numbers, by I. N. Murzinov
On partial solutions of equations of hydrodynamics of rarefied plasma for axially-symetrical movements, by V. P. Korobeinikov.

D'yakov, S. P.
SHOCK WAVES IN A RELAXING MEDIUM (Udarnye Volny v Relaksiruyushchey Srede). 19p. (foreign text included) 6 refs. DTC-4.
Order from OTS, ETC or DTC $1.35 62-28791

Unedited draft trans. of Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (USSR) 1954, v. 27, no. 6, p. 728-734.
Another trans. is available from SLA as RT-3908, 10p.

DESCRIPTORS: *Shock waves, Theory.

Sheremet'ev, G. D.
OPTICAL PROPERTIES OF URANIUM HEXAFLUORIDE. II. PHOTOLUMINESCENCE AND ITS TEMPERATURE DEPENDENCE, tr. by J. M. Crabtree. 1962 [12]p. 8 refs. AERE Trans 923.
Order from OTS or SLA $1.60 63-15933

Trans. of Optika i Spektroskopiya (USSR) 1957, v. 2, no. 1, p. 99-106.

DESCRIPTORS: Optical properties, *Uranium compounds, *Fluorides, *Luminescence, Spectroscopy, Band spectrum, Temperature, Spectra (Visible and ultraviolet).

The luminescence spectrum of solid UF_6 at 88°K was studied. The spectrum consists of 20 over-lapping bands in the 4040-4870 Å region. The frequency of the purely electronic transition is 24,540 cm^{-1}. The difference in frequency of 200 cm^{-1} between adjacent bands in the luminescence spectra agrees with a fundamental frequency of the Raman spectrum of UF_6. The luminescence spectrum is independent of the wavelength of the exciting light. Temperature quenching of luminescence in the 97 - 120°K range is accompanied by a parallel reduction in the duration of the excited state. (Author)

Sorokin, V. S.
LAW OF CONSERVATION OF MOTION AND MEASURE OF MOTION IN PHYSICS. [1963] [59]p.
Order from OTS or SLA $5.60 63-14674

Trans. of Uspekhi Fizicheskikh Nauk (USSR) 1956, v. 59, no. 2, p. 325-362.

DESCRIPTORS: *Motion, *Relativity theory, Particles, *Mass-energy relation, Velocity, *Equations of motion, Vector analysis, Transformations (Mathematics), Measurement.

Stepanov, P. E.
ON THE RELAXATION PHENOMENA IN A SHOCK WAVE IN GAS (O Relaksatsionnykh Yavleniyakh v Udarnoĭ Volne v Gaze). 25p. (foreign text included). 7 refs. DTC-3.
Order from OTS, ETC or DTC $1.65 62-28790

Unedited draft trans. of Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (USSR) 1947, v. 17, no. 5, p. 377-385.

DESCRIPTORS: *Shock waves, Gases, Theory.

Acoustics

Bailitis, Eduards.
THE SOUND IMPULSE OF A LIQUID SPARK. [4 Dec 62] 12p. (figs. omitted) 15 refs.
Order from SLA $1.60 63-10266

Trans. of Zeitschrift für Angewandte Physik (West Germany) 1957, v. 9, no. 9, p. 429-434.

DESCRIPTORS: *Sparks, Liquids, *Sound transmission, *Detonation waves, Measurement, *Piezoelectric transducers, Electric discharges, *Underwater sound.

The sound waves which are produced by sparkover in water are investigated by means of a piezoelectric receiver. The properties of the receiving probe are discussed. It could be shown that the electric voltage in the piezocrystal caused by the sound wave is proportional to the mean elastic strain inside the probe. It was found that the pressure increase at the front of the shock wave up to three-quarters of its maximum value takes place within approximately 0.2 to 0.3 μsec. The base width of the sound impulse is to a large extent independent of the dimensions of the discharge

circuit. The emitted sound energy is over a wide range proportional to the discharge energy. With increasing autoinduction L and increasing ohmic resistance R_a it decreases as $1/\sqrt{L}$ or $1/(R_f + R_a + R_f)$. Two compression waves are emitted from the place of breakdown in water The time interval between the pressure waves emitted is independent of the discharge energy. (Author)

Radionova, E. A., Andreev, N. and others.
MEASUREMENT OF THE INTENSITY OF A SHORT SOUND SIGNAL AT THE PRIMARY NEURON LEVEL OF THE AUDITORY SYSTEM [AND] SEMINAR ON SPOKEN COMMUNICATION. 11 Apr 63 [18]p.
JPRS: 18659. 16 refs.
Order from OTS $0.50 63-21564

Trans. of #Akusticheskii Zhurnal (USSR) 1962, v. 8, no. 4, p. 447-453 and 492-493.

DESCRIPTORS: *Sound signals, Intensity, Nerve cells, *Hearing, Measurement, *Speech transmission, Auditory nerve, Audiometry, *Speech, *Conferences.

Electricity and Magnetism

Borovik, E. S., Busol, F. I., and Grishin, S. F.
INVESTIGATION OF THE POSSIBILITY OF OBTAINING STATIONARY MAGNETIC FIELDS IN COILS COOLED BY LIQUID HYDROGEN. [1962] 14p. (refs. omitted).
Order from OTS or SLA $1.60 63-10210

Trans. of unidentified mono. [by Soviet Scientists on the occasion of the visit to Project Matterhorn, May 60] paper no. 13.
Another trans. is available from OTS $0.50 as AEC-tr-4070, Apr 61, 17p.

DESCRIPTORS: *Coils, *Magnetic fields, Coolants, Hydrogen, Liquefied gases.

For abstract see Technical Translations 6: 219, 1961.

Chervonenkis, Ya. M.
POWER TRANSMISSION BY DIRECT CURRENT. Series: Achievements and Problems of Modern Science, tr. by N. Kaner. 1963, 100p. PL-480 Int.
Order from OTS $1.00 63-11101

Trans. of mono. Peredacha Energii Postoyannym Tokom. Seriya: Itogi i Problemy Sovremennoi Nauki, Moscow/Leningrad, 1948 [141p.].

DESCRIPTORS: *Direct current, *Transmission lines, *Electricity, *Electric cables, Rectifiers, Inverters, High frequency, Voltage regulators, Power equipment, Electric discharges, Countermeasures.

Contents:
Long-distance power transmission
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Measurements in high-voltage D-C power-transmission installations
Cable lines and overhead lines for D-C transmission
Three-phase and D-C power-transmission systems compared
High-voltage D-C power transmission in the USSR

Kleen, Werner.
ON THE PASSAGE OF ELECTRICITY THROUGH FINE METAL WIRES [Uber den Durchgang der Elektrizitat durch Metallische Haardrahte]. [1963] 22p. (7 figs. omitted) 21 refs.
Order from SLA $2.60 63-14008

Trans. of Annalen der Physik (Germany) 1931 [ser. 5] v. 11 p. 579-605.

DESCRIPTORS: Electricity, *Electric currents, Metals, *Wire, Deformation, Vaporization, *Explosion effects, Glow discharges, Particiles.

An investigation was made into the phenomena associated with the passage of electricity through fine metal wires. As the power increases four stages of the explosion can be distinguished. Two stages, the distribution of glow in a series of isolated points and the stratification of the vaporized metal, are attributable to the deformation of the molten wire. This deformation is a capillary phenomenon; an unduloid is formed due to the surface tension of the cylinder of molten metal. The distance between the beads of the unduloid depends only slightly on the metal. It is proportional to the initial diameter of the wire. For the metals investigated the proportionality factors lie between 2.3 and 2.7. The metal particles ejected from the wire are electrically charged. (Author)

Electronics

PROBLEMS OF MAGNETOHYDRODYNAMICS AND PLASMA DYNAMICS, II (Voprosy Magnitnoi Gidrodinamiki i Dinamiki Plazmy, II). 25 Feb 63 [660]p. refs. FTD-TT-62-1301; AD-299 679.
Order from OTS or SLA $28.50 63-15981

Trans. of mono. [Trudy Konferentsii po Magnitnoi Gidrodinamiki, Akademiya Nauk Latviiskoi SSR] (Conference on Theoretical and Applied Magnetohydrodynamics (no. 2) Riga, 27 June-2 July 60) Riga, 1962, 660p.

DESCRIPTORS: *Magnetohydrodynamics, *Plasma physics, Gas flow, Magnetic fields, Solar disturbances, Equations of motion, Liquid metals, Shock waves, Viscosity, Fluid flow, Oceans, Ionosphere, Stability, Pumps, Induction systems, Mercury, Electric furnaces.

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Some problems in the theory of simple waves, by R. V. Polovin
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Meridional flows of a conducting liquid, by G. L. Goodzovskii and others.
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Instability of a system of two electron beams in a magnetic field, by V. N. Rutkevich
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Effect of fluctuating microfields on multiple collisions in a gas of charged (or gravitating) particles, by V. I. Kogan
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Some problems in relativistic gasdynamics of charged particles, by V. N. Tsytovich
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Behavior of a plasma in strong electric fields, by L. V. Dubovo and others

On the role of space charge in a discharge with oscillating electrons in a magnetic field, by M. N. Vasil'eva and E. M. Reikhrudel'

Experimental determination of the nature and concentration of easily ionized impurties by means of absorption of radio waves behind a shock wave, by T. V. Bazhenova and Yu. S. Lobastov

Experimental determination of the concentration of charged particles in argon and krypton behind a shock wave, by V. N. Alyamovskii and others.

Pyrometric investigation of a gas behind a shock wave, by E. M. Kudryavtsev and others

Magnetic compression of plasma, by I. M. Zolototrubov and others

New data on the influence of a magnetic field on the departure of ions from the plasma of inert gases, by I. A. Vasil'eva and V. L. Granovskii

Investigation of the motion of a conducting gas accelerated by crossed electric and magnetic fields, by A. K. Musin and V. L. Granovskii

Kinetic analysis of the structure of the boundary of a plasma in a magnetic field, by A. I. Morozov and L. S. Solov'ev

Structure of transition layer between a plasma and a magnetic field, by V. P. Shabanskii

Effect of external magnetic field on the boundary layer in a plasma, by E. I. Andriankin and Yu. S. Sayasov

Motion of viscous plasma in a magnetic field for arbitrary WT, by A. I. Gubanov and Yu. P. Lun'kin

Magnetic "wringing" of free-molecule plasma current, by V. N. Zhigulev

Stability of plane poiseuille flow of a plasma with finite conductivity in a magnetic field, by Yu. A. Tarasov

Investigation of the stability of a plasma with the aid of the generalized energy principle, by V. F. Aleksin and V. I. Yashin

Some problems in the magnetohydrodynamic stability of a thin annular pinch, by Yu. V. Vandakurov

Instability of electromagnetic waves in a system of interpenetrating plasmas, by A. A. Rukhadze

Investigation of the motion of a conducting gas accelerated by crossed electric and magnetic fields, by L. S. Lomonosova and others.

Observation of hydromagnetic oscillations in the plasma of a pulsed electrodeless discharge, by M. D. Gabovich and I. M. Mitropan

Schemes of electrogasdynamic machines, by E. I. Yantovskii

Circle diagram of an induction magnetogasdynamic generator, by L. M. Dronnik

Some experiments with a plasma jet, by B. F. Bobylev and V. E. Stryzhak

Acceleration of a conducting gas by a traveling magnetic field, by V. B. Baranov

Equations of motion of plasmoids in external magnetic field, by K. D. Sinel'nikov and others

Concerning the interaction between plasmoids and a magnetic field, by I. M. Podgornyi and V. I. Sumarokov

Conductivity of a plasma of a straight-line pinch, by M. D. Borisov and others

Investigation of the propagation of shock waves in a discharge tube, by L. G. Chernikova and M. D. Ladyzhenskii

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Instability of a plasma with anisotropic distribution of ion and electron velocities, by A. B. Kitsenko and K. N. Stepanov

Interaction of an electron beam with a plasma in a magnetic field, by I. F. Kharchenko and others

Investigation of the high-frequency oscillations of the plasma pinch of a vacuum arc, by B. G. Safronov and others

Study of magnetic properties of a plasma behind the front of a strong shock wave, by K. D. Sinel'nikov and others

Experiments with plasma jets in a magnetic field, by A. M. Kostylev and A. A. Porotnikov

High-frequency discharge in moving gas, by A. M. Khazen

Contribution to the theory of the synchronous magnetogasdynamic machine, by L. Yu. Ustimenko and I. Yantovskii

Electric dipole field in a plasma in an external magnetic field, by B. P. Kononov and others

Status and problems involved in the development of the theory of electromagnetic processes in induction pumps and in machinery with open magnetic circuits, by A. I. Vol'dek

Transverse edge in planar induction pumps using a liquid metal channel with conducting walls, by A. I. Vol'dek and Kh. I. Yanes

Longitudinal edge effect in secondary circuit of liquid metal induction pumps with open magnetic circuit, by A. I. Vol'dek and Kh. K. Ross

Equivalent circuit of D. C. pump channel, by Yu. A. Birzvalk

Determination of certain parameters of electromagnetic pumps with the aid of an electrolytic trough, by L. V. Nitsetskii and E. K. Yankop

Experimental investigation of planar induction pumps, by A. I. Vol'dek and Kh. I. Yanes

Design of D. C. pump for maximum efficiency, by Yu. A. Birzvalk

Centrifugal induction pump, by A. K. Veze and others

Magnetohydrodynamic phenomena in a channel of a planar induction pump with account of attenuation of the electromagnetic field, by N. M. Okhremenko

Hydrodynamic processes in the channel of an electromagnetic induction pump, by Ya. Ya. Lielpeter

Nonstationary flow of a liquid metal in the channel of a planar induction pump, by N. M. Okhremenko

Development of laminar flow of a viscous electrically conducting liquid between parallel planes under the influence of a transverse magnetic field, by N. M. Okhremenko

Batching of liquid metal with the aid of electromagnetic induction pumps, by I. M. Kirko and Ya. Ya. Lielpeter

Concerning the transverse edge effect in induction pumps, by L. Ya. Ulmanis

Measurement of velocities of a liquid in magnetohydrodynamics by the electromagnetic method, by Yu. M. Mikhailov

Use of electromagnetic flow meters for the measurement of the flow of liquid media with ionic conductivity, by L. M. Korsunskii

Some results of an experimental investigation of turbulent flow of liquid metal in a transverse magnetic field, by G. G. Branover and O. A. Lielausis

Effect of the magnetic field on the resistance in the flow of mercury around some bodies, by O. A. Lielausis and A. B. Tsinober

Effect of transverse magnetic field on the local hydraulic resistance in a mercury stream, by G. G. Branover and O. A. Lielausis

Effect of magnetic field on turbulent transport processes in a stream of mercury, by G. G. Branover and O. A. Lielausis

Certain problems in the contact properties of metallic surfaces, by R. K. Dukure and G. P. Upit

Concerning the stability of free suspension of a drop of liquid metal in an alternating magnetic field, by I. M. Kirko and A. E. Mikel'son

Motion of nonintermixing layers of liquid metal and nonelectrically conducting liquid in a traveling magnetic field, by V. A. Briskman

Mixing of metal inside a freely suspended drop, by A. E. Mikel'son

Basic parameters and constructions of electromagnetic stirring devices for electric arc furnaces, by Ya. P. Zvorono

Electromagnetic stirring of steel in the ladle, by M. G. Rezin

Power supplies for installations for electromagnetic stirring of liquid steel in ladles, by Ya. I. Drobinin

Hydrogas analogy in magnetohydrodynamics, by L. A. Vulis and P. L. Gusika

Certain properties of suspended layer of ferromagnetic particles in a magnetic field, by M. V. Filippov

Magnetic separation of particles in suspended state, by M. V. Filippov

Experimental study of the influence of electromagnetic forces on the flow of an electrolyte around some bodies, by R. K. Dukure and O. A. Lielausis

Heat transfer to liquid metals, by V. M. Borishanskii

Some physical and chemical phenomena observed in flows of liquid metal coolants, by A. S. Andreev

Babanov, Yu. N.
INCREASING RECEIVER SENSITIVITY IN THE PRESENCE OF TWO SIGNALS WITH COINCIDENT FREQUENCY SPECTRA. 22 Apr 63, 8p. JPRS: 18802.
Order from OTS $0.50 63-21618

Trans. of #Radiotekhnika (USSR) 1962, v. 17, no. 12, p. 48-51.

DESCRIPTORS: *Radio signals, Amplitude modulation, *Radio interference, *Radio receivers, Sensitivity, Frequency.

Theoretical calculations are presented showing the possibility of separating, in a receiver, two AM signals with completely overlapping spectra. A block diagram is given of the special stage which effects the signal separation. (Author)

Eberhardt, N.
POSSIBLE SOURCES OF ENERGY OF ION OSCILLATIONS IN A HIGH AND ULTRAHIGH VACUUM. [1962] 20p. 18 refs.
Order from SLA $1.60 62-20372

Trans. of Zeitschrift für Angewandte Physik (West Germany) 1961, v. 13, no. 12, p. 560-565.

DESCRIPTORS: *Ions, *Ionization, *Plasma oscillations, *Electron tubes, Energy.

Interfering ion plasma oscillations have been observed repeatedly in various amplifier tubes. Two new mechanisms for continuous excitation of these oscillations are indicated. One is based on a phase "sorting" of the particles which oscillate in a potential well with non-linear law of force and repel mutually. There is a similarity to the mechanism of the well-known Barkhausen oscillations. The second is that ions are ionized increasingly in stages. During the plasma oscillation more ionizing impacts take place at positions of higher instantaneous ionic density than at positions of lower density.

Izyumov, N. M.
RADIO RELAY COMMUNICATIONS, CHAPS. 1, 4-5: SELECTED PARTS, tr. by B. M. K. 18 Apr 63, 24p. (figs. omitted). I-2218.
Order from OTS $0.75 63-11619

Trans. of mono. Radioreleinaya Svayz', 2d. ed., Moscow/Leningrad, 1962, p. 5-12, 44-49, 60-74 ([Massovaya Radio Biblioteka] (USSR) 1962, v. 447).

DESCRIPTORS: *Radio relay systems, *Radio communication systems, Communication systems, *Multiplex, Timing circuits, *Pulse modulation, Classification.

Contents:
Principles of radio relay communications and of wave lengths
Time division multiplexing of radio relay lines: time division multiplexing principle
Types of pulse modulation.

Spivak, G. V. and Repkova, O. N.
BEHAVIOR OF AN ELECTRON-ION PLASMA IN A MAGNETIC FIELD. [1963] [9]p. 9 refs.
Order from OTS or SLA $1.10 63-14479

Trans. of Akademiya Nauk SSSR. Izvestiya. Seriya Fizicheskaya, 1944, v. 8, no. 5, p. 275-279.

DESCRIPTORS: *Plasma physics, *Gas discharges, *Magnetic fields, Charged particles, Electrons, Energy, Distribution, Magnetic properties, Analysis

Molecular Physics and Spectroscopy

Akishin, P. A., Gorokhov, L. N., and Sidorov, L. N.
MASS SPECTROMETRIC INVESTIGATION OF CESIUM HALIDES. [1962] [6]p. 11 refs.
Order from OTS or SLA $1.10 63-13576

Trans. of Akad[emiya] Nauk SSSR. Dokl[ady] 1960, v. 135 [no. 1] p. 113-116.

DESCRIPTORS: *Cesium compounds, *Halides, Dissociation, Molecular association, *Mass spectroscopy, Molecular spectrum, Ionic current.

Connes, Pierre, Duong Hong Tuan and Pinard, Jacques.
SEPARATION OF SPECTRAL LINES BY HIGH FREQUENCY MODULATION. [1963] 38p. 16 refs.
Order from SLA $3.60 63-14012

Trans. of J[ournal] de Physique et le Radium (France) 1962, v. 23, no. 3, p. 173-183.

DESCRIPTORS: *Line spectrum, Separation, *Phase modulation, High frequency, Sidebands, *Interferometers, Continuous spectrum.

In order to illustrate the phenomenon of "artificial lines" by the use of a multiple reflection interferometer (which may be regarded as a multiresonant cavity) illuminated by a continuous spectrum, these lines are separated into sidebands through high frequency modulation with a Kerr cell; the resulting spectrum is then scanned by a second interferometer. Phase modulation, suppressed carrier modulation, amplitude modulation, and single sideband modulation are discussed.

Herzberg, G., Monfils, A., and Rosen, B.
MOLECULAR SPECTRA IN THE REMOTE ULTRAVIOLET (INTRODUCTORY REPORT). [1962] 27p. 61 refs.
Order from SLA $2.60 63-10245

Trans. of Soc[iété] Roy[ale des] Sci[ences de] Liége. Mém[oires] (Belgium) 1961, v. 4, p. 146-178.

DESCRIPTORS: *Molecular spectroscopy, *Ultraviolet spectroscopy, Theory, Scientific research, Absorption spectrum, Continuous spectrum, *Astrophysics.

Kazakova, V. M., and Syrkin, Ya. K.
THE SUPERFINE STRUCTURE OF THE SPECTRA OF THE ELECTRON PARAMAGNETIC RESONANCE OF BENZOPHENONE-K-KETYL. [1962] [4]p. 5 refs.
Order from OTS or SLA $1.10 63-13579

Trans. of Akad[emiya] Nauk SSSR. Dokl[ady] 1960, v. 131 [no. 2] p. 346-347.
Another trans. is available from OTS $0.50 as 60-21929, APL/JHU TG-230-T188, 10 Aug 60, 3p.

DESCRIPTORS: *Benzophenones, *Paramagnetic resonance, Electrons, *Hyperfine structure, Line spectrum, Spin, Density.

Kirillov, E. A.
CONDITIONS FOR OBSERVING FINE STRUCTURE IN THE ABSORPTION SPECTRUM OF THE SILVER HALIDES. [1963] 4p. 12 refs.
Order from OTS or SLA $1.10 63-14476

Trans. of Zhurnal Nauchnoi i Prikladnoi Fotografii i Kinematografii (USSR) 1962, v. 7, no. 3, p. 225-226.

DESCRIPTORS: *Silver compounds, Halides, *Absorption spectrum, Spectrophotometers, Structures.

Sauter, E.
SPECTROSCOPIC METHOD FOR THE DETECTION OF VERY SMALL AMOUNTS OF WATER. 22 June 49, 5p. (figs. tables omitted).
Order from SLA $1.10 62-20480

Trans. of Z[ei]ts[chrift] f[ür] Naturforschung (West Germany) 1948, v. 3a [no. 7] p. 392-395.

DESCRIPTORS: *Molecular spectroscopy, Identification, *Water, Organic materials, Discharge tubes, Quartz, Glow discharges.

A spectroscopic method for the detection of water admixtures down to 1:180,000 in a glow discharge using the disintegration spectrum of the OH group occurring with the excitation of H_2O is outlined. (Author)

Sushchinskii, M. M.
MOLECULAR SPECTROSCOPY. 7 May 63, 13p. JPRS: 19072.
Order from OTS $0.50 63-21760

Trans. of Akademiya Nauk SSSR. Vestnik, 1962, v. 32, no. 10, p. 36-45.

DESCRIPTORS: *Molecular spectroscopy, Molecular structure, Determination, Quantum mechanics.

A state-of-the-art review.

Solid State Physics

Belyaev, L. M. and Chernov, A. A.
GROWING OF CRYSTALS AND AN INVESTIGATION OF THE KINETICS OF THEIR FORMATION. 21 Mar 63 [20]p. JPRS: 18257.
Order from OTS $0.50 63-21377

Trans. of #Kristallografiya (USSR) 1962, v. 7, no. 5, p. 659-663.

DESCRIPTORS: *Crystal growth, Dynamics, Crystallization, Crystal lattice defects, Phase studies, Electron microscopes.

Böhm, H. P., Clauss, A. and others
EXTREMELY THIN CARBON FILMS. [1962] 4p. (figs. tables refs. omitted).
Order from SLA $1.10 63-10269

Trans. of Z[eitschrift für] Naturforsch[ung] (West Germany) 1962, v. 17b [no. 3] p. 150-153.

DESCRIPTORS: *Thin films, *Carbon, Production, *Graphite, Oxides, Reduction, Thickness, Electron microscopy, X-ray diffraction analysis.

During the reduction of graphite oxide in extremely dilute alkaline suspension, an extremely fine sheet of carbon is produced. The determination of the thickness of the thinnest sheets showed, by the contrast in the electron microscope, that they consist of only a few, and in part probably of a single carbon hexagonal layer of the graphite lattice. The results are supported by X-ray studies as well as by measurements of the specific surface. (Author)

Eckart, F.
CONDUCTIVITY MEASUREMENTS ON SELENIUM. [1963] 23p. 35 refs.
Order from SLA $2.60 63-10912

Partial trans. (p. 233-241, 248-252) of Annalen der Physik (East Germany) 1954 [ser. 6] v. 14 [no. 6] p. 233-252.

DESCRIPTORS: *Selenium, *Electrical conductance, Temperature, Semiconductors, Impurities, Bromine, Solids, Liquids, Vacuum apparatus, Crystal structure.

The dependence of conductivity on temperature of solid and liquid selenium is essentially determined by the purity of the selenium and is substantially influenced by the introduction of oxygen in the case of highly purified selenium. An E-value of 2.2-2.9 ev. was measured from a very reproducible $\log\sigma$-1/T straight line for pure selenium which was investigated in vacuum (about 10^{-3} mm) for a temperature range from 100°C up to the melting point. Whether or not the average value of 2.6 ev. corresponds to the band-band transition cannot be determined from the conductivity measurements alone. (Author)

Fischer, R., Neumann, H., and Kleint, Ch.
ON THE THEORY OF FIELD EMISSION IN SEMICONDUCTORS. [1962] 10p. 10 refs.
Order from SLA $1.10 63-10863

Trans. of Annalen der Physik (East Germany) 1961, ser. 7, v. 8, no. 3/4, p. 196-203.

DESCRIPTORS: *Semiconductors, *Field emission, Field theory, Temperature, Penetration.

The theory of field emission in semiconductors for any temperature range was extended to p-type semiconductors, and formulas for the field penetration were derived. The surface states were not considered. (Author)

Gobrecht, H. and Tausend, A.
OPTICAL PROPERTIES AND BAND MODEL OF SELENIUM. Nov 61, 25p. 36 refs.
Order from SLA $2.60 63-10917

Trans. of Z[eitschrift für] Physik (West Germany) 1961, v. 161, p. 205-220.

DESCRIPTORS: *Selenium, Glass, Crystals, *Optical properties, Determination, *Crystal structure, Models (Simulations).

The optical constants of amorphous selenium and of single crystal selenium were measured between 0.4 and 23 microns. Characteristic bands were found which depended on the orientation of the E-vector with respect to the crystallographic Z-axis. A band model of both forms of selenium is described on the basis of the measurements and some theoretical work. (Author)

Görlich, P., Karras, H., and Reimann, R.
DISCOLORATION OF SYNTHETIC CaF_2 SINGLE CRYSTALS. [1962] 4p. (figs. omitted).
Order from SLA $1.10 63-10256

Partial trans. (excerpts) from Akademie] der Wissensch[aften] Berlin. Kl[asse] für Math[ematik] Physik und Technik. Sitzungsberichte (Germany) 1960, no. 3, p. 19, 20, 24, 27 and 33.

DESCRIPTORS: *Single crystals, *Calcium compounds, Fluorides, *Rare earth elements, Discoloration, Absorption spectrum, *Fluorescence

The absorption, fluorescence and discoloration properties of the synthetic crystals prepared from very pure starting materials were investigated and compared with the results of other authors. The fluorescence of the systems CaF_2/Sm^{++} and CaF_2/Yb^{++} (both measured at -180°C) corresponded to the results obtained by Feofilow on synthetic sodium fluorites. In the system CaF_2/Eu^{++} we furthermore found two additional doublet-type fluorescence bands, which were already very intense at room temperature. Within the systems CaF_2/U, CaF_2/Sn, CaF_2/Y, CaF_2/Sm, CaF_2/Yb, CaF_2/Eu, CaF_2/Gd and CaF_2/Ce, we have measured the subtractive discoloration-spectra as a function of the radiation-dose. Furthermore, the color-fading processes on storage in the dark were studied. The systems investigated could be classified in four groups. (Author)

Häusler, Eberhard.
ELASTIC WAVES ON THE SURFACE OF SOLID, ESPECIALLY STRATIFIED MEDIA, AND THEIR APPLICATION TO NON-DESTRUCTIVE TESTING MATERIALS (Elastische Wellen an der Oberfläche Fester, Insbesondere Geschichteter Medien, und ihre Anwendung auf die Zerstörungsfreie Werkstoffprüfung). [1962] [13]p. (foreign text included) 11 refs.
Order from SLA $1.60 62-20294

Trans. of Materialprüfung (West Germany) 1960, v. 2, no. 2, p. 51-55.

DESCRIPTORS: *Mechanical waves, Elasticity, Solids, *Non-destructive testing, Surface properties, Propagation, Wave analysis, Mathematical analysis.

The author describes different types of elastic waves on the surface of homogeneous and stratified solid media. Rayleigh waves appear on the surface (free from stresses) of an elastic semi-infinite body; their amplitudes exponentially decay with increasing depth; their particles oscillate in transverse and longitudinal direction. Love waves are transverse elastic waves, which may occur, if the semi-infinite body is covered by a layer of a different material. In stratified media the propagation velocity of both types of waves depends on the product of frequency by thickness of layer; the Love waves are reflected at a cohesion defect, while the Rayleigh waves may continue to propagate as Lamb waves. When using commercial ultrasonic pulse apparatuses these waves can be used not only for detecting surface defects but also for determining the elastic properties of contact layers, for testing the thickness, porosity, and cohesion of platings, as well as for determining the thickness of cementation layers. (Author)

Kamprath, W.
THE OPTICAL ABSORPTION OF AMORPHOUS SELENIUM WITH ADDITIONS OF TELLURIUM, ARSENIC AND BISMUTH. [1963] 6p. 9 refs.
Order from SLA $1.10 63-10918

Trans. of Annalen der Physik (East Germany) 1962 [ser. 7] v. 9, no. 7/8, p. 382-387.

DESCRIPTORS: *Selenium, *Tellurium, *Arsenic, *Bismuth, *Absorption spectrum, Infrared radiation, Melting, Solids.

The infrared absorption spectrum of amorphous selenium was investigated and an exponential dependence of the absorption coefficient on the energy of the incident light was established at the band edge. In addition a band situated at 9.1 microns is confirmed. The homogeneous, mixed selenium-tellurium and selenium-arsenic melts can be undercooled amorphously and show the characteristic property of solid solutions. For the addition of small amounts of bismuth to pure selenium one obtains a very strong displacement of the band edge, which can be interpreted as a contraction of the width of the forbidden zone through perturbed states.

Hoseman, R.
THEORY OF X-RAY SCATTERING BY PARTICLE MASSES: SETTING UP OF AGGREGATION DIAGRAMS. [1962] 26p. (figs. omitted) 9 refs.
Order from SLA $2.60 63-10494

Trans. of Zeitschrift für Physik (Germany) 1939, v. 113, p. 751-768.

DESCRIPTORS: *X-rays, *Scattering, Particles, Cellulose, Fibers, Theory.

Kauer, E. and Rabenau, A.
INFORMATION CONCERNING THE SEMICONDUCTOR BEHAVIOR OF THE CHALCOGENIDES OF ALUMINUM, GALLIUM AND INDIUM. [1962] 5p. 24 refs.
Order from SLA $1.10 63-10880

Trans. of Z[eitschrift für] Naturforschung (West Germany) 1958, v. 13a, p. 531-536.

DESCRIPTORS: *Semiconductors, *Aluminum compounds, *Galium compounds, *Indium compounds, *Chalcogenides, Chemical bonds, Band spectrum, Temperature.

It is confirmed by optical measurements that all chalcogenides of aluminum, gallium and indium of the type $A_2^{III}B_3^{IV}$ possess semiconductor character. The band intervals and their temperature dependences are given and compared with the results of other authors.

The increase in the band interval with increasing periodic number and increasing ionic character of the bond corresponds to the known mathematical relationship of bonds, which in the case of the chalcogenides investigated here proves to be largely independent of the lattice structure. (Author)

Kiselev, S. V., Ozerov, R. P., and Zhdanov, G. S.
DETECTION OF THE MAGNETIC ORDERING IN THE $BiFeO_3$ FERROELECTRIC BY MEANS OF NEUTRON DIFFRACTION STUDY (Neitronograficheskoe Obnaruzhenie Magnitnogo Uporyadocheniya v Segnetoelektrike $BiFeO_3$) tr. by A. Pingell. 29 Nov 62, 7p. 13 refs. NRL trans. no. 921.
Order from OTS $0.50 63-11553

Trans. of Akademiya Nauk SSSR. Doklady, 1962, v. 145, no. 6, p. 1255-1258.

DESCRIPTORS: *Neutron diffraction analysis, *Ferroelectric materials, *Crystal structure, Bismuth compounds, Iron compounds, Ozone, Magnetic properties, Detection.

Mel'nikov, A. I.
REDUCTION OF CHLORIDES OF SILICON AND GERMANIUM AND FORMATION OF CRYSTALLINE FILMS. [1963] 11p. 3 refs.
Order from OTS or SLA $1.60 63-14694

Trans. of Zhurnal Neorganicheskoi Khimii (USSR) 1957, v. 2, no. 2, p. 233-237.
Other translations are available from LC or SLA mi$2.40, ph$3.30 as 61-10327 [1960] 13p. and from OTS $3.75 in AEC-tr-4052, PL-480-PST-79, 1960, 380p.

DESCRIPTORS: *Reduction (Chemistry), *Chlorides, *Silicon compounds, *Germanium compounds, Films, Hydrogen, *Semiconducting films, *Crystallization, Reaction kinetics.

For abstract see Technical Translations 5: 272, 1961.

Pick, H.
ON THE EFFECT OF TEMPERATURE ON THE EXCITATION OF COLOR CENTERS. [1962] 18p. 10 refs.
Order from SLA $1.60 63-10676

Trans. of Annalen der Physik (Germany) 1938 [ser. 5] v. 31, p. 365-376.

DESCRIPTORS: Crystals, *Potassium compounds, *Sodium compounds, Bromides, Chlorides, *Color centers, Excitation, Absorption spectrum, Temperature.

The variation of the absorption spectrum of the color centers in KCl, KBr, and NaCl crystals between 400 and 1000mμ caused by the excitation process is demonstrated. The quatum yield for the optical transformation of F-centers to F'-centers exhibits a considerable temperature dependence. It is shown and starts for KCl with the constant limiting value $\eta_0 = 2$. This leads to a new interpretation of the nature of F'-centers. The excitation is practically limited to a certain temperature region and the attainable maximum excitation is extensively dependent on temperature. Such a temperature dependence of the maximum excitation is explained for low temperatures in terms of an optical equilibrium between the F- and F'-centers the absorption spectra of which overlap. At higher temperatures the maximum excitation decreases because the lifetime of the F'-centers is greatly reduced. (Author)

Pockels, Friedrich.
THE INFLUENCE OF ELASTIC DEFORMATIONS, PARTICULARLY OF UNILATERAL STRESS UPON THE OPTICAL BEHAVIOR OF CRYSTALLINE SUBSTANCES. [1963] 43p. 33 refs.
Order from SLA $4.60 63-14009

Trans. of [Annalen der Physik] (Germany) 1889 [n. s.] v. 37, p. 144-172.

DESCRIPTORS: *Crystal structure, *Elasticity, Deformation, Stresses, Optical properties, Polarization, Light, Theory, Materials, Crystals.

Pokrovskii, Ya. E.
EFFECT OF SURFACE LEVELS ON THE ELECTRICAL PROPERTIES OF FINE-GRAIN FILMS OF GERMANIUM, SILICON AND TELLURIUM [Vliyanie Poverkhnostnykh Urovnei na Elektricheskie Svoistva Melkozernistykh Plenok Germaniya, Kremniya i Tellura]. [1963] [33]p. 22 refs.
Order from OTS or SLA $3.60 63-14692

Trans. of Zhurnal Tekhnicheskoi Fiziki (USSR) 1954, v. 24, no. 7, p. 1229-1243.
Another trans. is available from OTS $0.50 as 62-11518, MDF P-111 [1961] 20p.

DESCRIPTORS: *Semiconducting films, Surface area, Hall effect, Electrical properties, Grains (Metallurgy), Germanium, Silicon, Tellurium.

For abstract see Technical Translations 8: 184, 1962

Rexer, Ernst.
INVESTIGATION ON THE LONG-WAVELENGTH SATELLITE OF THE ULTRAVIOLET CHARACTERISTIC ABSORPTION OF ALKALI-HALIDE CRYSTALS, PTS. 1, 3-4, 7-8 (Untersuchungen am Langwelligen Ausläufer der Ultravioletten Eigenabsorption von Alkali-Halogenid-Kristallen). [1962] 29p. 19 refs.
Order from SLA $2.60 63-10769

Partial trans. (p. 70-76, 83-92) of Zeit[schrift] fur Physik (Germany) 1937, v. 106, p. 70-92.

DESCRIPTORS: *Ultraviolet light, Absorption, *Crystals, Alkali metal compounds, *Potassium compounds, *Sodium compounds, Halides, Bromides, Chlorides, Absorption spectrum, *Color centers, Excitation, Heat treatment, Electrolysis, *Fluorescence, *Electron capture

Contents:
Introduction
The crystalline substance
Optical "excitation" of the satellite
"Excitation" of the long-wavelength satellite by heat treatment
Summary and discussion of findings concerning the properties of satellite absorption

Ryvkin, S. M., Konovalenko, B. M., and Smetannikova, Yu. S.
DEPENDENCE OF INDUCED CONDUCTION IN LAYERS AND SINGLE CRYSTALS OF CADMIUM SULFIDE ON THE ENERGY OF THE EXCITING ELECTRONS [Zavisimost' Navedennoi Provodimosti v Sloyakh i Monokristallakh Sernistogo Kadmiya ot Energii Vozbuzhdayushchikh Elektronov]. [1961] 26p. 12 refs. MDF R 111.
Order from OTS or SLA $2.60 62-19927

Trans. of Zh[urnal] Tekh[nicheskoi] Fiz[iki] (USSR) 1954, v. 24, no. 6, p. 961-977.

DESCRIPTORS: *Single crystals, *Cadmium compounds, Sulfides, *Electron bombardment, *Photoconductivity, Inductance, Atomic energy levels, Absorption spectrum.

Results are given of an investigation of the non-equilibrium (induced) conduction in CdS arising under bombardment by electrons with 2-3 kev energies. It is shown that as the energy of the bombarding electrons decreases, the sharp drop of the 'transverse' induced conduction, per unit energy falling on the sample, in the 10 kev and below region is explained by the decrease in the depth of electron penetration into the substance. An analogy exists between this drop in the induced conduction and the drop in the photo-conduction in the depths of the intrinsic band of light absorption. (Author)

Savitskii, E. M. and Dashkovskii, A. I.
INVESTIGATION OF INTERNAL FRICTION AS A METHOD OF PHYSICO-CHEMICAL ANALYSIS OF METAL ALLOYS. [1963] [14]p. 12 refs.
Order from OTS or SLA $1.60 63-10907

Trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya: Metallurgiya i Toplivo, 1961, no. 5, p. 96-100.

DESCRIPTORS: Metals, *Alloys, *Internal friction, Crystal structure, Transformations, Temperature, Reaction kinetics, Analysis.

This paper gives the results of the measurement of internal friction in several single component and binary metal systems and an attempt is made to establish the nature of the variation of the level of internal friction with the variation of such equilibrium factors as the temperature and composition.

Semiletov, S. A. and Pinsker, Z. G.
ELECTRONOGRAPHIC STUDY OF THE DEGREE OF PERFECTION OF GERMANIUM MONOCRYSTALS [Elektronograficheskoye Issledovaniye Stepeni Sovershenstva Monokristallov Germaniya]. [1963] [13]p.
Order from OTS or SLA $1.60 63-14680

Trans. of Kristallografiya (USSR) 1956, v. 1, no. 2, p. 209-213.
Another trans. is available from LC or SLA mi$1.80, ph$1.80 as 59-18626, M-V. Trans-2388, 29 Nov 57 [7]p.

DESCRIPTORS: *Germanium, *Single crystals, *Crystal structure, Etched crystals, *Electron diffraction analysis, Semiconductors

For abstract see Technical Translation 2: 830, 1959.

Semiletov, S. A.
ELECTRONOGRAPHIC STUDY OF THE STRUCTURE OF GERMANIUM FILMS OBTAINED BY VACUUM DEPOSITION. [1963] [10]p. 7 refs.
Order from OTS or SLA $1.10 63-14681

Trans. of Kristallografiya (USSR) 1956, v. 1, no. 5, p. 542-545.
Another trans. is available from SLA as R-5179, 8p.

DESCRIPTORS: *Germanium, *Films, Vaporization, Sublimation, Crystallization, *Low-pressure research, Structure, *Electron diffraction analysis, Semiconducting films

The structure of sublimated germanium films was studied with respect to the nature of the sublayers, their temperature, speed of deposition, and thickness of the films. Different types of orientation of the crystallites in germanium films were established, which are due to the presence of a plane sublayer and the rectilinear propagation of the atomic beams. The possibility of obtaining highly oriented (monocrystalline) films by deposition on germanium monocrystals was shown. (Author)

Zhukovskii, V. M., Tkachenko, E. V., and Vlasov, V. G.
ON THE PROBLEMS OF PHASE TRANSFORMATIONS IN THE REDUCTION OF U_4O_9. 22 May 63, 7p. 14 refs. JPRS: 19324.
Order from OTS $0.50 63-21879

Trans. of #Fizika Metallov i Metallovedenie (USSR) 1963, v. 15, no. 2, p. 210-214.

DESCRIPTORS: *Uranium compounds, *Oxides, Dioxides, Reduction (Chemistry), *Phase transitions, Transformations, *Crystal structure, X-ray diffraction analysis, Gas analysis.

A discussion is presented of the contradictory opinions of various authors on the state and structural characteristics of the phase components of the uranium-oxygen system in the composition region UO_2-$UO_{2.25}$. The reduction of U_4O_9 with decomposed ammonia and solid carbon was studied. The dependence of the lattice parameter of uranium dioxide on the amount of oxygen introduced into it is presented. Considerations on the structure of uranium oxides in the composition region UO_2 -$UO_{2.25}$ are discussed. (Author)

Thermodynamics

Adrianov, V. N., Shorin, S. N.
RADIANT HEAT TRANSFER IN A FLOWING RADIATING MEDIUM Luchistyi Teploobmen v Potoke Izluchayushchei Sredy). [1960] [11]p. 8 refs.
Order from OTS or SLA $1.60 AEC-tr-3928

Trans. of Akademiya Nauk SSSR. Otdelenie Tekhnicheskikh Nauk. Izvestiya, 1958, no. 5, p. 46-50.
Another trans. is available from OTS or SLA $2.60 as 61-20703 [1961] [23]p.

DESCRIPTORS: Fuels, Combustion, Heat exchangers, High temperature research, Boilers, Ovens, Industrial equipment, Surfaces, Velocity, Specific heat, Absorption, Scattering, *Heat transfer, Hydrodynamics, *Gas flow, *Thermal radiation.

For abstract see Technical Translations 7: 367, 1962.

Berezin, G. I. and Kiselev, A. V.
DIE WÄRMEKAPAZITÄT DES ADSORPTIONS-SYSTEMS SILICAGEL-WASSER (The Specific Heat of the Silicagel-Water Adsorption System).
Order from TIB $1.55

Trans. in German of Akademiya Nauk SSSR. Doklady, 1960, v. 135, no. 3, p. 638-641.

DESCRIPTORS: *Silicon compounds, Dioxides, *Gels, Water, *Adsorption, Specific heat.

Entelis, S. G., Korovina, G. V., and Chirkov, N. M.
THERMODYNAMIK DER ABSORPTION VON PROPYLEN IN H_2SO_4/H_2O (The Thermodynamics of Propylene Absorption by the H_2SO_4-H_2O System). 7p.
Order from TIB $1.45

Trans. in German of Akademiya Nauk SSSR. Doklady, 1960, v. 134, no. 4, p. 856-[859].

DESCRIPTORS: *Thermodynamics, *Propenes, *Absorption, Sulfuric acid, Water.

Khundzhua, G. G.
HIGH-SENSITIVITY RESISTANCE THERMOMETER FOR THE CONTINUOUS RECORDING OF TEMPERATURE PULSATIONS. [1963] 3p. 4 refs.
Order from OTS or SLA $1.10 63-14010

Trans. of Moscow U. Vestnik. [Seriya 3: Fizika, Astronomiya] (USSR) 1960 [v. 15] no. 6, p. 64-66.

DESCRIPTORS: *Resistance thermometers, *Temperature sensitive elements, Design, Operation, Temperature, Measurement, Thermometers

This article gives the general calculations for a special a-c. bridge for measuring small variations in temperature. The block diagram of an electronic resistance thermometer is presented and its principle of operation described. (Author)

Kirillin, V. A.
PROBLEMS OF HIGH TEMPERATURE HEAT PHYSICS. 2 Apr 63 [9]p. JPRS: 18497
Order from OTS $0.50 63-21479

Trans. of Akademiya Nauk SSSR. Vestnik, 1963 [v. 33] no. 2, p. 38-43.

DESCRIPTORS: *High-temperature research, Plasma physics, *Thermodynamics, Heat-resistant materials, Magnetohydrodynamics, Energy conversion, Heat.

Konsetov, V. V.
AN EXPERIMENTAL INVESTIGATION INTO HEAT-LOSS UPON CONDENSATION OF STEAM IN HORIZONTAL AND LIGHTLY INCLINED TUBES (Eksperimental'noe Issledovanie Teplootdachi pri Kondensatsii Vodyanogo para Vnutri Gorizontal'nykh i Slabonaklonennykh Trub) tr. by G. J. Tee. [1962] [13]p. (foreign text included) 3 refs. [DSIR] NLL M. 3320.
Order from OTS or SLA $1.60 62-23896

Trans. Teploenergetika (USSR) 1960 [v. 7, no. 12] p. 67-71.

DESCRIPTORS: Pipes, *Steam, Condensation, *Heat transfer, *Boiler tubes, Specific heat.

The results are given of an experimental investigation of the heat-loss upon condensation of pure saturated steam at high and medium pressures in horizontal and slightly inclined tubes. Comparisons are made with other investigations, and computational formulae are recommended. (Author)

Wave Propagation

Akhmanov, S. A., Gvozdover, S. D. and others
NONLINEAR EFFECTS AND PARAMETRIC REGENERATION DURING THE INTERACTION OF WAVES IN WAVEGUIDE SYSTEMS WITH LONG ELECTRON FLOWS. 6 May 63, 13p. 15 refs. JPRS: 19051.
Order from OTS $0.50 63-21747

Trans. of #Zhurnal Tekhnicheskoi Fiziki (USSR) 1963, v. 33, no. 1, p. 90-99.

DESCRIPTORS: *Electromagnetic waves, *Waveguides, Propagation, *Electron beams, Frequency, Parametric amplifiers, Nonlinear systems.

This is a report on the results of an experimental study of the interaction of waves in waveguide systems with long electron flows. The experiments were carried out in the centimeter and decimeter wavelength ranges with a free-drift electron flow (nonlinear space charge wave interaction) and an electron beam associated with a retarding system (nonlinear interaction of space charge waves with retarding system field). Special attention was devoted to the study of factors determining the effectiveness of parametric regeneration running waves of a small signal by the energy of intensive injection running waves; the ratio of signal and injection frequencies varied over wide limits. It has been established that in systems of this type, as a rule one has to deal with a considerable number of combination frequencies which substantially affect the course of nonlinear and parametric processes. (Author)

Brocks, K.
THE DIFFRACTION FIELD OF MICROWAVE APERTURE ANTENNAS OF THE FRESNEL AND FRAUNHOFER TYPE AS A BASIS FOR THE DIMENSIONING OF MEASUREMENT RANGES OF ANTENNAS. [1961] [81]p. (1 fig. 15 refs. omitted) 143 refs.
Order from SLA $8.10 62-10479

Partial trans. (p. 5-8 and 83-[115]) from Deutsche Versuchsanstalt für Luftfahrt, e. V. [Berichte] (West Germany) 1960, no. 108 [115]p.

DESCRIPTORS: *Microwaves, Propagation, Interference, Reflection, Microwave equipment, *Antennas, Slot antennas, Antenna radiation patterns, Measurement, *Radio ranges, Bibliography.

In measuring the radiation characteristics over short distances, errors are made because of (1) the insufficient length of the (measurement) range, (2) the focusing of the illumination antenna (counter-antenna). (3) the interference by ground reflections. With the example of an aperture antenna, with the aid of the scalar diffraction theory, expressions were derived for the minimum measurement range and the maximum antenna dimensions. The errors in some directions of the radiation diagram are estimated. Antennas of the Fresnel type require wide measurement ranges. Various methods of suppressing the ground reflection are described and methods of internal space and model measurements are discussed. (Author)

Krukovskii-Sinevich, K. V. and Malyarevskii, N. M.
CERTAIN PECULIARITIES OF THE DETECTION OF SIGNALS REFLECTED FROM MOVING OBJECTS. [1962] [7]p. 2 refs.
Order from OTS or SLA $1.10 63-10511

Trans. of #Izvestiya V[ysshikh] U[chebnykh] Z[avedenii]. Radiotekh[nika] (USSR) 1962, v. 5, no. 4, p. 523-527.

DESCRIPTORS: Detection, *Signals, *Signal-to-noise ratio, Reflection, Frequency.

Navysh-Bylinskaya, V. N.
COMPUTING MAXIMUM USABLE FREQUENCIES OF RADIO COMMUNICATION LINKS. 30 Apr 63, 23p. 3 refs. JPRS: 18997.
Order from OTS $0.75 63-21726

Trans. of Akademiya Nauk SSSR. Institut Zemnogo Magnetizma, Ionosfery i Rasprostraneniya Radiovoln. Trudy, 1961, no. 19(29) p. 71-84.

DESCRIPTORS: *Radio communication systems, *Radio waves, Radiofrequency interference, Solar disturbances, Correlation techniques, Propagation, *Frequency, Radio broadcasting.

This study was undertaken to compare the accuracy of two different methods of computation of MPCh (Maximum Usable Frequency) for the short-wave radio communication links in order to find out which of these two to recommend as the most satisfactory method to be used in radio forecasts published by the Institute of Terrestrial Magnetism, Inosphere and Propagation of Radio-waves. Only two most widely used methods were compared: The method of "reference points" and the method of "equal jumps". The examination of these two methods was done by comparing the calculated values of MPCh with the actual values observed on several radio communication links. The results obtained are concerned with the middle latitude and polar communication links and are right for the periods of maximum solar activity.

Willie, H.
RESULTS OF PROPAGATION MEASUREMENTS WITH A 15,000 MC MICROWAVE LINK. [1963] 7p.
Order from SLA $1.10 63-14094

Trans. of VDE Fachberichte (West Germany) 1956, v. 19, p. 91-92.

DESCRIPTORS: Propagation, *Microwaves, *Interference analyzers, Radio transmitters, Microwave equipment, *Attenuation, Measurement.

The field strength of a 15,000 Mc transmitter located on the Stadelberg is continuously being monitored in Munich, at a distance of 44 km (28 miles). The recordings made during a selected time period were subjected to a cumulative frequency analysis. It was possible to distinguish clearly between time periods during which the field strength faded due to interference because of multi-path propagation, and those periods when fading was caused by water vapor and rain absorption. During interference fading, selective field strength fluctuations were also observed within a band of 50 Mc width. (Author)

RESEARCH METHODS, TECHNIQUES AND EQUIPMENT

COMMUNIST CHINA'S SCIENCE AND TECHNOLOGY NO. 30. 22 Apr 63, 72p. JPRS: 18827.
Order from OTS $2.00 63-21634

Trans. of T'u Jang (Chinese People's Republic) 1961, no. 6, p. 15-19, 23-24, 29-30; no. 8, p. 1-5, 55-56.

DESCRIPTORS: *China, *Science, Scientific research, *Soils, Salinity, Hydroxides, *Grasses, Water, *Geography, *Classification, Distribution, *Lakes, Terrain, Reservoirs, Plants (Botany).

Contents:
The formation and improvement of the "top saturation ground" in the southwest region of Honan, by Chang Han-chieh
Outline of the saline-alkali soils of Tibet's Hei Ho region, by Chiang Yu-wen and Ho T'ung-k"ang
Effects of rotation grazing on grassland improvement and soil and water conservation in the steppes of northern Shensi, by Pai Chih-chien and others
Theoretical development in soil geography and problems in soil classification, by Hou Hsüeh-yu
Improvement and utilization of lake fields (hu-t'ien) and island grounds (chou-tri) by Hsin K'un-ch'ien.

COMMUNIST CHINA'S SCIENCE AND TECHNOLOGY: [SELECTED] TRANSLATIONS NO. 29. 22 Apr 63, 45p. JPRS: 18815.
Order from OTS $1.25 63-21625

Trans. of Cahiers Franco-Chinois (France) 1962, no. 15/16, p. 23-45; Chien Chu Hsüeh Pao (Chinese People's Republic) 1962, no. 12, p. 14; and from Kuang Ming Jih Pao (Chinese People's Republic) 1963, 6 Feb, p. 2; 10 Feb, p. 2; Jen Min Jih Pao (Chinese People's Republic) 1963, 2 Feb, p. 5.

DESCRIPTORS: *China, *Science, Scientific research, *Medicine, Design, *Construction, Acoustics, Illumination, Heating, Insects, *Pest control, Chemicals, *Agriculture, Physics, Plants (Botany), Solar radiation, Soils, Climatology.

Contents:
Medicine in the People's Republic of China, by Ruffie
Conference on the study of Architectural Physics (no. 2) by Li Ken-hua
Microbiological control of insect pests, by Hsin Chieh-liu
Agricultural chemicals, by Huang Jui-lun
Physics and agriculture, by Wang Chen-fei.

COMMUNIST CHINA'S SCIENCE AND TECHNOLOGY: [SELECTED] TRANSLATIONS NO. 34. 6 May 63, 56p. JPRS: 19037.
Order from OTS $1.50 63-21741

Trans. of Ti Li (Chinese People's Republic) 1961, no. 4, p. 156-157, 168-169, 172-177; no. 5, p. 200-205, 224-225.

DESCRIPTORS: *Scientific research, *China, *Deserts, *Terrain, *Economics, *Geography, *Rivers, Sand, Drift, Control.

Contents:
Problems concerning the development and utilization of the interior of the great T'a K'e La Ma Kan Desert, by Chu Chen-ta
The morphologic conditions of Wen Shan T'ung and Miao races autonomous Chou in Yunnan province and their relation to agricultural production, by Chu Ta-k'uei
Some fundamental problems concerning economic geography, by Ts'ao T'ing-fan
Change of river courses in Soviet Russia, by Arnotov and Karbov
Preliminary achievements in study of drift-sand control by clay barriers in Min Ch'in, by Keng K'uan-hung.

COMMUNIST CHINA'S SCIENCE AND TECHNOLOGY: [SELECTED] TRANSLATIONS NO. 35. 17 May 63, 33p. JPRS: 19258.
Order from OTS $1.00 63-21847

Trans. (some excerpts, some summaries) of Chung Hua Wai K'o Tsa Chih (Chinese People's Republic) 1962, v. 10, no. 12, p. 767, 769, 773-775, 777, 781, 790-792, 798-799, inside back cover.

DESCRIPTORS: *Scientific research, *China, Abstracts, Hypothermia, Brain, *Surgery, *Anesthetics, Poisoning, Drugs, Meninges, Lungs, Tuberculosis, Tumors, Thrombosis, Veins, Legs, Spinal cord, Wounds, Fevers, Urinary system, *Surgical instruments, *Intestines, Chinese traditional medicine.

Contents:
Use of controlled-hypothermia-hypotension in cranial surgery, by Shih Yu-wu and Shen Chien-fan
Prevention and management of accidental administration of drugs into subarachnoid cavity during epidural anesthesia
Recent developments in anesthesia in China as viewed in articles received by the journal, by Shang Te-yen
Bronchial ligation in the treatment of advanced pulmonary tuberculosis, by Chang Liang-t'sai and others

Report on the treatment of tumors, by Sun Pao-ken
Diagnosis and treatment of thrombosis of deeper veins of the lower extremity, by Chang Yen-ling
Eitology and mechanism of high fever developed after cervical spinal sections, by Wu Tsu-yao and others
Iliocecal twist induced by acupuncture treatment of appendicitis, by Li Kuang-hua and Li Jen-pin
On suturing prostate fossal opening in suprapublic prostatectomy, by Huang Cheng and others
The breather-type suction tube and its use in decompression enterotomy, by Chang Chin-che.

COMMUNIST CHINA'S SCIENCE AND TECHNOLOGY: [SELECTED] TRANSLATIONS NO. 36. 21 May 63, 63p. JPRS: 19302.
Order from OTS $1.75 63-21871

Trans. of Ti Li Hsüeh Pao (Chinese People's Republic) 1962, v. 28, no. 1, p. 18-19, 31, 54, 73-83, 90-92; and from Kuang Ming Jih Pao (Chinese People's Republic) 1963, 18 Mar, p. 2.

DESCRIPTORS: *Scientific research, *China, *Atmospheric motion, *Glaciers, *Heat transfer, Soils, Water privation, Geography, *Education.

Contents:
On the onset and endings of monsoon periods in China and determination of their dates, by Hsu Su-ying and Kao Yu-shi
On the comparative development of quaternary glaciers near Mt. Everst, by T'eng Ko Li Feng, and T'uan Chieh Feng of the Ch'i Lien Mountains, by Liu Tse-ch'un and others
Mt. Everest glaciers near peaks of T'ien Shan, and junction of Nan Shan Ranges
Heat exchange in the soil in the North China Plain, by Ts'o Ta-Kan and others
An analysis of drought conditions in Hopei provine during the Ming and Ch'ing dynasties, by T'ang Hsi-jen and Pao Shu-jen
A few opinions concerning the system of levels of units of the division of unified natural regions of China, by Ch'u Chen-min and Hsu Lun-hu
Professor of parasitology Ch'en Hsin-t'ao (7115 1800 7118) calls cognate studies the key to learning in graduate program, by Chang T'ien-lai.

FOREIGN DEVELOPMENTS IN MACHINE TRANSLATION AND INFORMATION PROCESSING NO. 121. 13 May 63, 53p. 7 refs. JPRS: 19151.
Order from OTS $1.50 63-21804

Trans. of Voprosy Yazkoznaniya (USSR) 1962 [v. 11] no. 6, p. 115-130 and Vestnik Vysshei Shkoly (USSR) 1963 [v. 21] no. 2, p. 50-59.

DESCRIPTORS: *Machine translation, Entropy, *Language, Information theory, Probability, Models (Simulations), Training.

Contents:
Entropy of the Russian language, by A. A. Piotrovskaya and others
Modeling and similarity theory, by V. A. Venikov
Structural and applied linguistics, by V. A. Zvegintsev.

NEWS OF HIGHER EDUCATIONAL INSTITUTIONS. MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION, INSTRUMENT BUILDING SERIES, 1962, VOL. 5, NO. 6. 14 May 63, 145p. JPRS: 19186.
Order from OTS $3.00 63-21810

Trans. of Izvestiya Vysshikh Uchebnykh Zavedenii. Priborostroenie (USSR) 1962, v. 5, no. 6, p. 3-136.

DESCRIPTORS: *Precision equipment, *Instrumentation, *Scientific research, Noise generators, *Measuring devices (Electrical and electronic), Automation, Digital computers, Analog computers, *Computers, *Inertial navigation, *Optical instruments, Radio equipment, Thermal stresses, Thermometers, Detectors, *Cutting tools, Engineering personnel.

Contents:
Variable-band infra-low-frequency noise generator, by V. A. Pryanishnikov
A method for noncontact measurement of automatically-wound wire resistors, by V. Z. Feygels
A-C compensator with an unbalanced-voltage amplifier, by A. L. Tsiber
Effect of leads in the statodynamic tensometric hookups, by B. A. Glagovski
Efficiency of electric forees in the polarizing filtering materials, by O. A. Myazdrikov
Optimum structures of digital systems of automatic control, by Yu. M. Korshunov
Planning the transistor-control circuits for pulse amplifiers in electrical-machine automation, by T. A. Glazenko
A method for determining the correlation function of normal random processes, by V. F. Nesteruk
Automatic photoelectric decoder of printed information, by P. M. Chegolin and V. S. Bogdanov
Classification of errors in analog computers, by A. N. Lebedev
Binary-decimal codes with one negative weight, by D. A. Pospelov
Invariant property of inertial systems based on the dead reckoning method, by N. I. Efremov
Providing air-gap for placing the diaphragm in some designs of photo objectives, by P. D. Ivanov
Correcting the astigmatism of a nonspherical cap for a definite field angle, by Lu Han'min'
Thermoelastic stresses in radio components used for building the instruments, by Yu. M. Volokobinskii and K. E. Medvedev
Evaluation of nonuniformity and calculation of average temperatures under the third-class, by N. A. Yaryshev and G. A. Zubova
Designing the moving systems of the feeler of a primary detector, by M. A. Bel'for
Investigation of gear-shaper cutters whose initial-contour displacement nonlinearly depend on the cut-layer thickness, by Yu. R. Vitenberg
Hookup for taking amplitude-phase characteristics of fourpoles at subaudio frequencies, by T. M. Aliev and A. A. Ter-Khachaturov
Aleksandr Alekseevich Chernyshev (80th birthday) .....

Balogh, Sandor and Kalman, Arpad.
DEVELOPMENT AND PROBLEMS OF SCIENCE IN HUNGARY. 18 Mar 63 [16]p. JPRS: 18190.
Order from OTS $0.50 63-21350

Trans. of Valosag (Hungary) 1962, v. 5, no. 6, p. 8-16.

DESCRIPTORS: *Science, *Hungary, Scientific research, Research program administration.

Bekker, L. M.
A COMPARATIVE ANALYSIS OF PSYCHIC CONTROL AND REGULATION IN AUTOMATA. 7 May 63, 15p. JPRS: 19100.
Order from OTS $0.50 63-21782

Trans. of Voprosy Filosofii (USSR) 1963 [v. 17] no. 2, p. 70-81.

DESCRIPTORS: *Automation, *Cybernetics, *Control systems, Reflexes, Sensory mechanisms, Philosophy, Analyzers (Psychology), Artificial intelligence, Information theory.

Dietz, Alfred.
CYBERNETICS APPLIED TO TEACHING RESEARCH. 4 Apr 63 [11]p. JPRS: 18549.
Order from OTS $0.50 63-21503

Trans. of Pädagogik (East Germany) 1963 [v. 18] no. 1, p. 114-120.

DESCRIPTORS: *Cybernetics, *Education, Scientific research, Memory, Learning, Artificial intelligence, Information theory, Probability, Reasoning

Gurevich, S. B.
INFORMATION APPROACH TO EVALUATING SENSITIVITY IN PHOTOGRAPHY AND TELEVISION. [1963] 17p. 10 refs.
Order from OTS or SLA $1.60 63-14474

Trans. of Zhurnal Nauchnoi i Prikladnoi Fotografii i Kinematografii (USSR) 1962, v. 7, no. 2, p. 133-140.

DESCRIPTORS: *Images, *Photography, *Television, Reproduction, Sensitivity, Analysis, Photographic images, Video signals, *Information theory.

Kannegiesser, Karl-Heinz.
CYBERNETICS AND SCIENTIFIC-TECHNICAL PROGRESS. 5 Apr 63 [8]p. JPRS: 18570.
Order from OTS $0.50 63-21516

Trans. die Arbeit (East Germany) 1963, no. 2, p. 13-15.

DESCRIPTORS: *Cybernetics, *Scientific research, Economics, Automation, Computers, Industrial production

Klopfer, A.
THE OBTAINING OF MAXIMUM VACUUMS WITH GETTER-ION PUMPS, AND THE MEASURING OF VERY LOW PRESSURES. 29 Sep 61 [20]p. 18 refs.
Order from SLA $1.60 63-10398

Trans. of [Vakuum-Technik (West Germany) 1961, v. 10, p. 113-118].

DESCRIPTORS: *Vacuum pumps, Ions, Low pressure research, Gas dischargers, Cathodes.

Getter-ion pumps, operated by cold-cathode gas discharges are very suitable for obtaining and maintaining in a routine way very low pressures in small, laboratory installations without the use of a diffusion pump. The lowest total pressure attained so far was 6×10^{-12} Torr [mm.]. The residual gases, analyzed with an omegatron, consisted chiefly of hydrogen and nitrogen. The vacuum system and the pumping methods are described. Information is given on pumping times, pressure increases after the ion pump is shut off, and methods of measuring these very low pressures. (Author)

Liu, Yung-ch'uan, Kao, Tsu-shun, and Liu, Cho.
A COMPARISON OF OLD AND NEW PROGRAMS OF RUSSIAN-CHINESE MACHINE TRANSLATION SYSTEMS. Foreign Developments in Machine Translation and Information Processing no. 115. 25 Mar 63 [39]p. JPRS: 18332.
Order from OTS $1.00 63-21413

Trans. of Chung Kuo Yu Wen (Chinese People's Republic) 1962, no. 10, p. 439-458.

DESCRIPTORS: *Machine translation, *Language, Synthesis, Vocabulary, China.

Liu, Yung-ch'uan.
MACHINE TRANSLATION AND LANGUAGE REFORM. Foreign Developments in Machine Translation and Information Processing no. 118. 17 Apr 63 [9]p. JPRS: 18764.
Order from OTS $0.50 63-21602

Trans. from Kuang Ming Jih Pao (Chinese People s Republic) 1963, 20 Feb, p. 4.

DESCRIPTORS: *Machine translation, *Language, China.

Difficulties encountered in machine translation of Chinese are discussed from the point-of-view that Chinese characters are not convenient for input-output and that there is no word boundary with the use of Chinese characters. The problems of tone marks and of similar forms (similar sounds) are also considered. The necessity of expanding the use of Mandarin and reducing alturnate readings of words is pointed out.

Schaschek, H. R.
GAS OR AIR PERMEABILITY TESTER. Jan 63, 4p. (figs. omitted).
Order from OTS or SLA $1.10 63-10911

Trans. of German patent DBP 1,063,832, pub. 20 Aug 59.

DESCRIPTORS: *Permeability, Sheets, Materials, Gases, Air, *Test equipment, Design, Measurement.

Starke, Peter and Thiele.
CYBERNETICS: WHAT DOES IT REALLY MEAN? 5 Apr 63 [9]p. JPRS: 18569.
Order from OTS $0.50 63-21515

Trans. from Leipziger Volkszeitung (East Germany) 1963, 2 Feb, p. 8.

DESCRIPTORS: *Cybernetics, Automation, Artificial intelligence, *Control systems, *Algorithms

Ukraintsev, B. S.
THE CONCEPTS OF REFLECTION AND INFORMATION IN CYBERNETICS. 7 May 63, 16p. JPRS: 19076.
Order from OTS $0.50 63-21764

Trans. of Voprosy Filosofii (USSR) 1963 [v. 17] no. 2, p. 26-38.

DESCRIPTORS: *Cybernetics, *Reflection, *Information theory, Artificial intelligence, Philosophy, Reasoning, Control systems

Reflection and information are related, but still distinguishable categories. Reflection is the category designated the special product of action of one material system on another, which constitutes reproduction in another form of characteristics of the first system in the characteristics of the second. Reflection can never be a sign of that being reflected. Information is a special form of a general bond under special conditions of a controlled system or associations of controlled systems. Information is the bond of the control apparatus of the system being controlled with any of its elements and with the external world, and also between the control apparatuses of different or similar systems, a bond which can be realized through the agency of a signal — the sign of reflection. Information arises at a certain level of organization of matter, when control processes occur. Information and control are twin categories, each of which cannot be manifest without the other. (Author)

Communication Theory

COMMUNICATIONS NETWORKS. PT. II. DESIGNATIONS AND ABBREVIATIONS. Rept. no. 2 on AID Work Assignment no. 33. 28 Jan 63 [49]p. AID rept. P-63-16; AD-297 355.
Order from OTS or SLA $4.60 63-15723

Listing of designations and abbreviations related to communications networks and based on source materials made available at AID.

DESCRIPTORS: *Communication equipment, *Communication systems.

Kharkevich, A. A. and Blokh, E. L.
ON THE LIMITING OUTPUT OF A COMMUNICATION SYSTEM [O Predel'noi Propusknoi Sposobnosto Sistemy Svyazi]. [1961] 9p. 7 refs. MDF K-114.
Order from OTS or SLA $1.10 62-23167

Trans. of Radiotekhnika (USSR) 1955, v. 10, no. 2, p. 14-20.

DESCRIPTORS: *Communication systems, *Communication theory, Coding, Transmission.

A derivation is given, based on geometric relations, of the expression for the limit output of a communication system. The result obtained shows that the well-known Shannon formula is correct only in the limit as the ratio of signal to interference powers approaches infinity. (Author)

Lennertz, J. and others.
EXPERIMENTAL PERFORATED TAPE OPERATION. [1962] 11p. (figs. omitted).
Order from SLA $1.60 62-18491

Trans. of [NTZ Nachrichtentechnische Zeitschrift] (West Germany) 1952, v. 5 [no. 8] p. 372-377.

DESCRIPTORS: *Communication theory, *Teletype systems, *Telegraph equipment.

SOCIAL SCIENCES

BULGARIAN-RUMANIAN SCIENTIFIC AND CULTURAL COOPERATION AGREEMENT. 29 Apr 63, 4p. JPRS: 18955.
Order from OTS $0.50 63-21706

Trans. from Durzhaven Vestnik (Bulgaria) 1963, no. 27, 5 Apr, p. 3-4.

DESCRIPTORS: Scientific research, *Culture, *Research program administration.

REGULATION ON THE SPECILIZATION OF FIRST CLASS VETERINARIANS. 30 Apr 63, 12p. JPRS: 18982.
Order from OTS $0.50 63-21720

Trans. of Sluzbeni List, Belgrade (Yugoslavia) 1962 [v. 18] no. 53, p. 937-941.

DESCRIPTORS: *Medical personnel, *Veterinary medicine, Diseases, Animals

USSR INDUSTRIAL DEVELOPMENT: SOVIET REGIONAL ECONOMY NO. 41. 15 May 63, 30p. JPRS: 19194.
Order from OTS $1.00 63-21815

Trans. of Ekonomika Radyans'koi Ukrainy (USSR) 1963, no. 1, p. 11-17, 32-35; and from Cheskaya Gazeta (USSR) 1963, no. 16[89] 20 Apr, p. 46-48.

DESCRIPTORS: *Industrial production, *Economics, Budgets, Machines, Industrial plants

Contents:
Basic tasks in the plan for the development of the Ukrainian national economy in 1963, by P. Rozenko
Assuring the rhythmic operation of machine building, by O. Konotop
Plants advertise sales and purchases; - institutes announce competitive program.

USSR INDUSTRIAL DEVELOPMENT: SOVIET REGIONAL ECONOMY NO. 43. 28 May 63, 16p.
JPRS: 19463.
Order from OTS $0.50 63-21943

Trans. of Byulleten' Tekhniko-Ekonomicheskoi Informatsii (USSR) 1963, no. 3, p. 68-71; Narodnoe Khozyaistvo Kazakhstana (USSR) 1963 [v. 21] no. 3, p. 3-6; and from Leninskoe Znamya (USSR) 1963, 9 Feb, p. 1.

DESCRIPTORS: *Industrial production, *Economics, Scientific organizations, Scientific research, *Industrial plants, *Automation.

Contents:
Measures worked out by the State Committee for the Coordination of scientific-Research work for carrying out the resolutions of the Nov 62 Plenum of the Central Committees of the CPSU, by E. A. Parfenov
Plant specialization in Karagandinskaya oblast (Kazakhstan) by V. Pirogov and A. Veksler
Mechanization and automation targets in Moscow oblast, by N. I. Pokrovskii.

Berg, A. I.
CYBERNETICS AND THE SOCIAL SCIENCES.
18 Apr 63 [16]p. JPRS: 18784.
Order from OTS $0.50 63-21613

Trans. of Nauka i Zhizn' (USSR) 1963,[v. 30] no. 2, p. 12-17.

DESCRIPTORS: *Cybernetics, *Social sciences, Labor, Political science, Language

Kamaev, V.
SCIENTIFIC AND TECHNICAL PROGRESS AND THE BUILDING OF A MATERIAL AND TECHNICAL BASE FOR COMMUNISM. 21 Mar 63 [13]p. JPRS: 18265.
Order from OTS $0.50 63-21379

Trans. of [Nauchnye Doklady Vysshei Shkoly]. Ekonomicheskie Nauki (USSR) 1962, no. 5, p. 3-10.

DESCRIPTORS: Communism, Growth, *Economics, *Scientific research, Labor, *Industrial production, Automation.

Reznikov, L. O.
THE GNOSEOLOGY OF PRAGMATISM AND THE SEMIOTICS OF CHARLES W. MORRIS. 18 Apr 63 [22]p. JPRS: 18770.
Order from OTS $0.75 63-21605

Trans. of Voprosy Filosofii (USSR) 1963 [v. 17] no. 1, p. 102-115.

DESCRIPTORS: *Philosophy, Sociology, Reasoning, Language.

Sweet, James S., compiler.
AMERICAN-RUSSIAN, RUSSIAN-AMERICAN HYDROLOGIC VOCABULARY. June 58 [27]p.
Order from OTS or SLA $2.60 63-13246

DESCRIPTORS: *Hydrology, *Vocabulary.

This is a vocabulary of about 300 words, most frequently used in the American and the Russian hydrologic literature. The primary purpose of the vocabulary is to make it possible for an American hydrologist with only the knowledge of Russian alphabet, to interpret the titles of Russian hydrologic papers, diagrams and tables, either to his complete satisfaction, or to determine whether a fuller translation and study of the text should be made. It will also enable him to translate, if necessary, American terms into Russian, thereby facilitating conferences, discussions and correspondence with the Russian counterparts. (Preface)

BOOK REVIEWS

The following book reviews can be ordered by number from OTS or SLA for $1.10. Each review includes, in addition to the material shown, a detailed statement of the coverage of the book and detailed table of contents.

BR-SOV/6079
Palkin, A. P.
EVOLUTION AND INTERRELATIONSHIP OF THREE- AND FOUR-COMPONENT RECIPROCAL FUSED-SALT SYSTEMS (Vzaimosvyaz' i razvitiye troynykh i chetvernykh vzaimnykh sistem v rasplavlennom sostoyanii). Khar'kov, Izd-vo Khar'kovskogo univ., 1960. 337p. 3000 copies printed.

BR-SOV/6188
Mikhlin, Solomon Grigor'yevich
MULTIDIMENSIONAL SINGULAR INTEGRALS AND INTEGRAL EQUATIONS (Mnogomernyye singulyarnyye integraly i integral'nyye uravneniya). Moscow, Fizmatgiz, 1962. 254p. 6000 copies printed.

BR-SOV/6195
MATERIALS OF THE SCIENTIFIC CONFERENCE OF THE CHEMICAL INSTITUTES OF THE ACADEMIES OF SCIENCIES OF THE AZERBAYDZHAN, ARMENIAN, AND GEORGIAN SSR (Materialy nauchnoy konferentsii institutov khimii Akademiya nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR) Yerevan, Izd-vo AN Armyanskoy SSR, 1962. 396p. 1100 copies printed.

BR-CHICOM/6199
Ku K'o-ch'üan
ORGANOSYNTHESIS (Yu Chi Ho Ch'eng Hua Hsüeh) Shanghai, K'o Hsueh Chi Shu Ch'u Pan She, 1961, 449p. 5000 copies printed.

BR-SOV/6201
TRANSACTIONS OF THE ALL-UNION CONGRESS ON THEORETICAL AND APPLIED MECHANICS, 27 JANUARY TO 3 FEBRUARY 1960. SUMMARY REPORTS (Trudy Vsesoyuznogo s"yezda po teoreticheskoy i prikladnoy mekhanike, 27 yanvarya -- 3 fevralya 1960 g. Obzornyye doklady). Moscow, Izd-vo AN SSSR, 1962. 467p. 3000 copies printed.

BR-SOV/6203
Volodin, Boris Grigor'yevich and others.
HANDBOOK FOR ENGINEERS ON THE SOLUTION OF PROBLEMS IN THE THEORY OF PROBABILITY; COLLECTION OF BASIC FORMULAS, TYPICAL SOLUTIONS, AND PRACTICE PROBLEMS (Rukovodstvo dlya inzhenerov po resheniyu zadach teorii veroyatnostey; sbornik osnovnykh formul, tipovykh resheniy i zadach dlya uprazheniy). Leningrad, Sudpromgiz, 1962. 422p. Errata slip inserted. 14,300 copies printed.

BR-SOV/6205
Makarchenko, A. F.
BASIC PROBLEMS IN THE ELECTROPHYSIOLOGY OF THE CENTRAL NERVOUS SYSTEM (Osnovnyye voprosy elektrofiziologii tsentral'noy nervoy sistemy) Kiyev, Izd-vo AN UkrSSR, 1962. 231p. Errata slip inserted. 1600 copies printed.

BR-SOV/6206
TRANSACTIONS OF THE CONFERENCE ON THE THEORY OF PLATES AND SHELLS HELD IN KAZAN', 24 TO 29 OCTOBER 1960 (Trudy Konferentsii po teorii plastin i obolochek, 24-29 oktyabrya 1960). Kazan', [Izd-vo Kazanskogo gosudarstvennogo universitetal 1961. 426p. 1000 copies printed.

BR-SOV/6207
Shmidt, L. M. and others.
MANUFACTURE OF HEAT- AND SOUND-INSULATING MATERIALS; PRESENTED STATE AND PERSPECTIVES IN DEVELOPMENT (Proizvodstvo teplo-zvukoizolyatsionnykh materialov; sostoyaniye i perspektivy razvitiya) Moscow, Gosstroyizdat, 1962. 145p. Errata slip inserted. 6500 copies printed.

BR-SOV/6208
Leshchinskiy, Nikolay Ivanovich
TRANSPORT OF RADIOACTIVE MATERIALS (Transportirovaniye radioaktivnykh veshchestv) Moscow, Gosatomizdat, 1962. 194p. Errata slip inserted. 600 copies printed.

BR-SOV/6209
Akhmechet, Leonid Samoylovich, Leonid Vladimirovich Vayser, and Arkadiy Romanovich Chudnovskiy.
THE USE OF PLASTICS IN ENGINEERING EQUIPMENT (Primeneniye plasticheskikh mass v tekhnologicheskoy osnastke) Moscow, Mashgiz, 1962. 155p. 10,500 copies printed.

BR-SOV/6210
Topchiyev, Aleksandr Vasil'vevich and others.
ALKYLATION OF ORGANIC COMPOUNDS WITH OLEFINS (Reaktsiya alkilirovaniya organicheskikh soyedineniy olefinami) Moscow, Izd-vo AN SSSR, 1962. 323p. Errata slip inserted. 3000 copies printed.

BR-SOV/6211
Balmukhanov, Saim Baluanovich
VASCULAR REACTIONS DURING RADIATION THERAPY (Sosudistyye reaktsii pri luchevoy terapii). Alma-Ata, Izd-vo AN KazSSR, 1962. 227p. 1750 copies printed.

BR-SOV/6212
Bydylin, B. V., and A. A. Vorob'yev
THE EFFECT OF RADIATION ON ION STRUCTURES (Deystviye izlucheniy na ionnyye struktury). Moscow, Gosatomizdat, 1962. 166p. 5000 copies printed.

BR-SOV/6214
Vasil'yev, Ivan Mitrofanovich
THE EFFECT OF IONIZING RADIATION ON PLANETS; RADIOPHYSIOLOGICAL INVESTIGATIONS (Deystviye ioniziruyushchikh izlucheniy na rasteniya; radiofiziologicheskiye issledovaniya) Moscow, Izd-vo AN SSSR, 1962. 222p. 2500 copies printed.

TRANSLATIONS IN PROCESS

CURRENT PROBLEMS OF PHYSICAL METALLOGRAPHY.
Mono. Sovremennye Voprosy Fizisheskogo metallovedeniya, Leningrad, 1962. p. 3-61.

RESEARCHES IN THE FIELD OF SILICON-ORGANIC COMPOUNDS: SYNTHESIS AND PHYSIO-CHEMICAL PROPERTIES. SELECTED PARTS.
Mono. Issledovaniya v Oblasti Kremniiorganicheskikh Soedinenii; Sintez i Fizikokhimicheskie Svoistva [Moscow] 1962, p. 105-145, 156-167.

Baratov, G. F.
MEASURES FOR PROTECTION FROM IONIZING RADIATION WHEN WORKING WITH RADIOACTIVE ISOTOPES FROM PROTECTION OF THE POPULATION.
Mono. Zashchita Naseleniya v Usloviyakh Primeneniya Atomnogo, Khimicheskogo i Bakteriologicheskogo Oruzhiya (Conditions for the Use of Atomic, Chemical and Biological Weapons) Kiev, 1962, p. 378-424.

Cheng, Shao, Wu, Li-Te, and T'ao, Tsung-Ying.
PROBABILITY AND MATHEMATICAL STATISTICS.
Mono. Ko Hskeh Chi Shu Ch'u Pan She, Shanghai, 1961, p. 315-344.

Dobrushin, R. L.
ASYMPTOTIC EVALUATIONS OF THE ERROR PROBABILITY FOR THE TRANSMISSION OF MESSAGES OVER A DISCRETE MEMORYLESS COMMUNICATION CHANNEL WITH A SYMMETRIC MATRIX OF TRANSACTION PROBABILITIES.
Teoriya Veroyatnostei i Ee Primeneniya (USSR) 1962, v. 7, no. 3, p. 283-311.

Frenkel, Ya. I.
THEORY OF THE PHENOMENA OF ATMOSPHERIC ELECTRICITY.
Mono. Teoriya Yavlenii Atmosfernogo Elektrichestva, Leningrad/Moscow, 1949, 156p.

Grinberg, G. D.
EPIDEMIOLOGICAL OBSERVATION IN A FOCUS OF INFECTION.
Mono. Epidemiologicheskoe Obsledovanie v Ochage Infektsii, Moscow, 1962, 130p.

Isakov, P. K. and Stasevich, R. A.
VELOCITY, ACCELERATION, WEIGHTLESSNESS, CHAPS. IV-V.
Mono. Skorosti, Uskoreniya, Nevesomost', n.p., p. 81-147.

Kifer, I. I.
TESTING FERROMAGNETIC MATERIALS; MAGNETIC MEASUREMENTS.
Mono. Ispytaniya Ferromagnitnykh Materialov; Magnitnye Izmereniya, 2d ed. Moscow, 1962, 543p.

Korablev, L. N.
LAMPS, TUBES WITH "COLD CATHODE".
Mono. Lampy s Kholodnym Katodom [Moscow] 1961, 176p.

Krasil'nikov, Yu. I.
MOMENT OF INCLINATION OF PLANE WINGS WITH SKEW BLOWING BY SUPERSONIC FLOW (Moment Krena Ploskikh Kryl'ev pri Kosom Obduve Sverkhzvukovym Potokom Gaza).
A[kademiya] N[auk] SSSR. Institut Mekhaniki. Inzhenernyi Sbornik, 1960, no. 29.

Letov, A. M.
STABILITY OF NONLINEAR CONTROL SYSTEMS.
Mono. Ustoichivost' Nelineinykh Reguliruemykh Sistem, 2d. ed., Moscow, 1962, 483p.

Lyapunov, Boris Valer'yanovich and Nikolaev, Nikolai Aleksandrovich.
OVER OBSTACLES ON TO THE STARS.
Mono. Skvoz' Ternii k Zvezdam (Per Aspera ad Astra) Moscow, 1962, p. 2-176.

Lyass, F. M.
APPLICATION OF THE ISOTOPIC MYELOGRAPHIC METHODS IN A NEUROSURGICAL CLINIC.
Mono. Izotopnaya Mielografiya, Moscow, 1962, p. 72-123, 127-128.

Pokrovskii, N. B.
CALCULATION AND MEASUREMENT OF SPEECH INTELLIGIBILITY.
Mono. Raschet i Izmerenie Razborchivosti Rechi, Moscow, 1962, 391p.

Poltavets, I. M., Sinitsyna, F. F. and others.
ACUTE RADIATION DISEASES AND THEIR TREATMENT.
Mono. Ostrye Radiatsionnye Porazheniya i Ikh Lechenie, Kiev, 1962, 155p.

Prokhorov, A. I.
BIONICA (Bionika)
[Vsesoyuznoe Obshchestvo po Rasprostraneniyu Politicheskikh i Nauchnykh Znanii]. Seriya 9: Fizika i Khimiya (USSR) 1963, no. 7, 56p.

Raulien, Heinz.
MILITARY APPLICATION OF CYBERNETICS.
Mono. Kybernetik im Militärwesen, n.p., 1963, p. 5-247.

Ryabova, B. A., ed.
NAVIGATIONAL AND GRYROSCOPICAL DEVICES.
Aviatsionnyi Institut, Moscow. Trudy (USSR) 1962, v. 147, 139p.

Schubart, G.
PRINCIPLES OF PRESENT AND FUTURE ROCKET PROPULSION SYSTEMS (Grundlagen der Genenwartigen und Zudunstigen Raketenantriebe).
Forschungszentrum der Luftfahrtindustrie. Vorträge und Abhandlungen, no. 4, Kammer der Technik, Vortrag, no. 10, v. 4, no. 10, 1958, 103p. [sic].

Shtoda, A. V.
CONSTRUCTION OF AIRCRAFT GAS-TURBINE ENGINES.
Mono. Konstruktsiya Aviatsionnykh Gazoturbinnykh Dvigatelei, Moscow, 1961, 411p.

PERIODICALS TRANSLATED COVER-TO-COVER

For basic list of Periodicals Translated Cover-to-Cover see Technical Translations Volume 10, Number 1.

This basic list is kept up-to-date by giving only changes in the subsequent issues of Technical Translations.

No changes are necessary for this issue.